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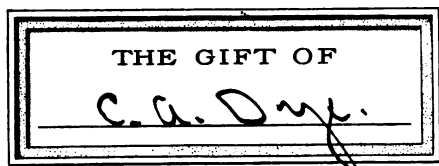
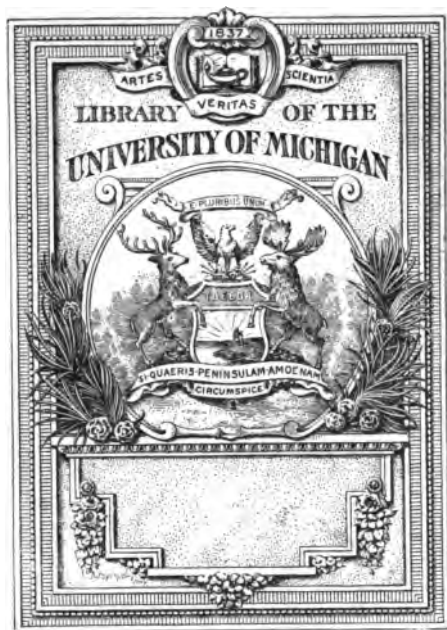
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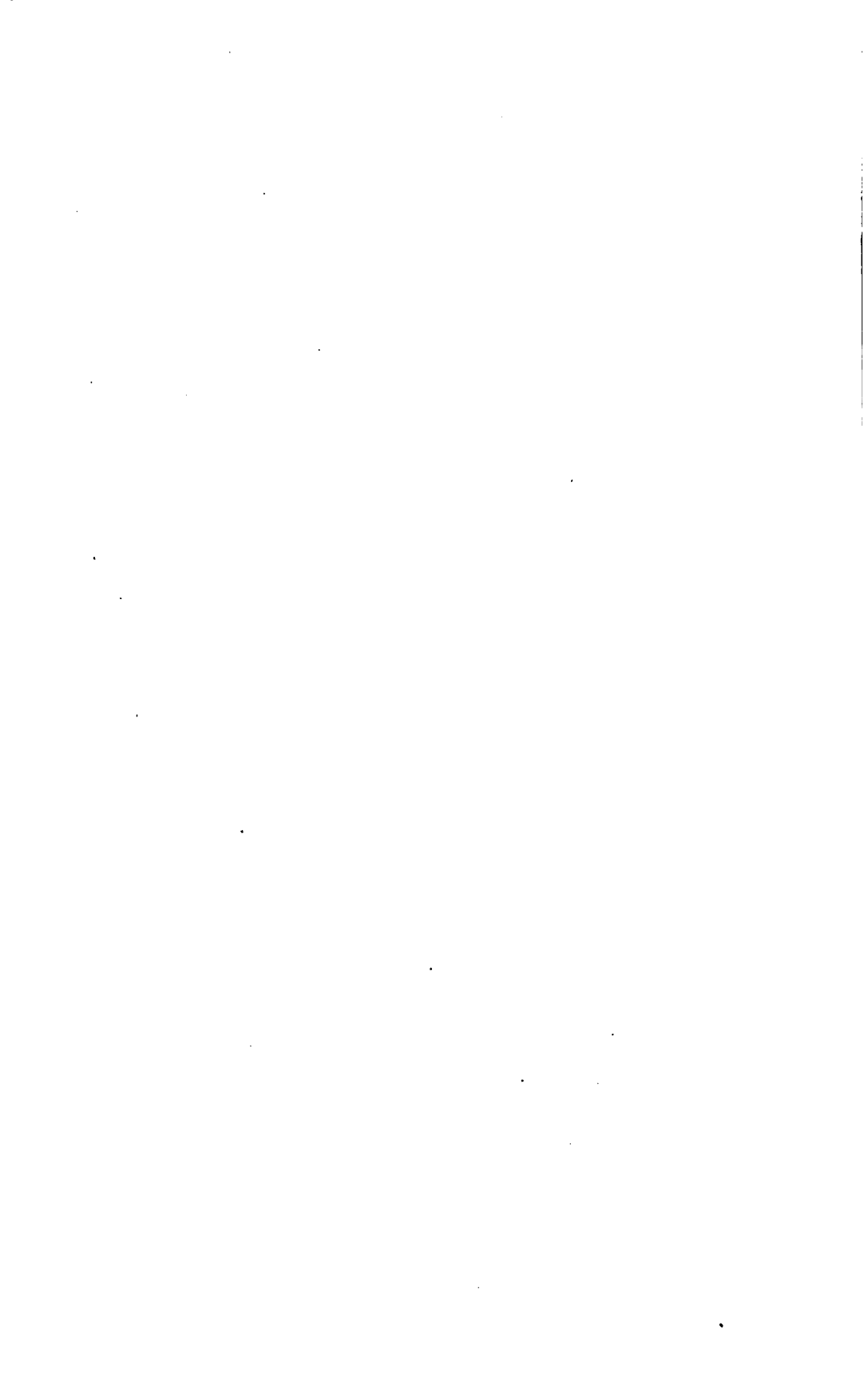
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OHIO STATE
Pharmaceutical Association.

NINTH ANNUAL REPORT
1887.



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PROCEEDINGS
OF THE
OHIO STATE
PHARMACEUTICAL ASSOCIATION

AT ITS
NINTH ANNUAL MEETING,

HELD IN
AKRON, JUNE 8TH, 9TH AND 10TH, 1887,

TOGETHER WITH THE
CONSTITUTION, BY-LAWS, AND LIST OF MEMBERS.



CLEVELAND, OHIO:
LEADER PRINTING COMPANY, 146 SUPERIOR STREET.
1887.

NOTICE.

Those wishing full sets of the Proceedings can obtain them from the Secretary at the following rates:

Proceedings of 1879, 1880, 1881, 1882 and 1883,	-	\$0 75
Proceedings of 1884,	- - - - -	50
Proceedings of 1885,	- - - - -	50
Proceedings of 1886,	- - - - -	50
Proceedings of 1887,	- - - - -	50
Or the nine volumes for	- - - - -	2 75

The next meeting of this Association will be held in Columbus, June 12th, 1888.

LIST OF OFFICERS OF THE ASSOCIATION SINCE ITS ORGANIZATION.

Presidents.

J. F. JUDGE, M. D.,	Cincinnati,	1879-80
J. W. DIETRICH,	Dayton,	1880-81
I. N. REED,	Toledo,	1881-82
D. C. PETERS, M. D.,	Zanesville,	1882-83
S. S. WEST,	Cleveland,	1883-84
JOHN WEYER,	Cincinnati,	1884-85
WM. M. MELVILLE,	Sandusky,	1885-86
VIRGIL COBLENTZ,	Springfield,	1886-87
S. E. ALLEN,	Akron,	1887-88

First Vice Presidents.

J. N. MCCOY,	Kenton,	1879-80
J. F. JUDGE, M. D.,	Cincinnati,	1880-81
T. L. A. GREVE,	Cincinnati,	1881-82
E. A. SCHELLENTRAGER,	Cleveland,	1882-83
JOHN WEYER,	Cincinnati,	1883-84
W. J. MARTIN,	Cincinnati,	1884-85
CHARLES LUDLOW,	Springfield,	1885-86
C. N. NYE,	Canton,	1886-87
M. D. FULTON,	Bucyrus,	1887-88

Second Vice Presidents.

M. L. MOONEY,	Cardington,	1879-80
H. C. GAYLORD,	Cleveland,	1880-81
J. N. MCCOY,	Kenton,	1881-82
F. HARRINGTON,	Logan,	1882-83
E. M. HATTON,	Zanesville,	1883-84
M. D. FULTON,	Bucyrus,	1884-85
D. D. BENEDICT, M. D.,	Norwalk,	1885-86
M. D. FULTON,	Bucyrus,	1886-87
GEO. W. VOSS,	Cincinnati,	1887-88

Permanent Secretary.

LEWIS C. HOPP,	Cleveland,	1879-88
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Permanent Treasurer.

CHAS. HUSTON,	Columbus,	1879-88
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Assistant Secretaries.

E. A. SCHELLENTRAGER,	Cleveland,	1882-83
W. J. MARTIN,	Cincinnati,	1883-84
W. M. MELVILLE,	Sandusky,	1884-85
CHARLES LUDLOW,	Springfield,	1885-86
C. T. INMAN,	Akron,	1886-87
H. C. COOK,	Columbus,	1887-88

OFFICERS OF THE ASSOCIATION, 1887-88.

President.		
S. E. ALLEN,	- - - - -	Akron.
First Vice President.		
M. D. FULTON,	- - - - -	Bucyrus.
Second Vice President.		
G. W. VOSS,	- - - - -	Cincinnati.
Permanent Secretary.		
LEWIS C. HOPP,	- - - - -	Cleveland.
Permanent Treasurer.		
CHAS. HUSTON,	- - - - -	Columbus.
Executive Committee.		
THEO. TROUPE,	- - - - -	Springfield.
C. T. INMAN,	- - - - -	Akron.
C. P. RENDIGS,	- - - - -	Cincinnati.

STANDING COMMITTEES.

Committee on Trade Interests.		
C. B. JOHNSON,	- - - - -	Middletown.
M. H. MCCLAIN,	- - - - -	Galion.
W. J. WALDING,	- - - - -	Toledo.
Committee on Papers and Queries.		
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W. SIMONSON,	- - - - -	Cincinnati.
J. I. BECK,	- - - - -	Springfield.
Committee on Pharmacy Laws.		
G. L. HECHLER,	- - - - -	Cleveland.
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CHAS. HUSTON,	- - - - -	Columbus.
J. H. WAHMHOF,	- - - - -	Delphos.
W. J. MARTIN,	- - - - -	Cincinnati.
Committee on Unofficial Formulas.		
LEWIS C. HOPP,	- - - - -	Cleveland.
E. GOODMAN,	- - - - -	Cincinnati.
H. C. COOK,	- - - - -	Columbus.
F. T. BOWER,	- - - - -	Toledo.
J. C. BOLGER,	- - - - -	Salem.

JOSEPH FEIL,	-	-	-	-	-	-	-	Cleveland.
J. U. LLOYD,	-	-	-	-	-	-	-	Cincinnati.
F. T. BOWER,	-	-	-	-	-	-	-	Toledo.

Reporter on Progress of Pharmacy.

**Committee on Revision of the Pharmacopœia and Delegates to the General Con-
vention for the Revision of the Pharmacopœia of the United States,**

LEWIS C. HOPP,	-	-	-	-	-	-	Cleveland.
T. L. A. GREVE, M.D.,	-	-	-	-	-	-	Cincinnati.
CHAS. HUSTON,	-	-	-	-	-	-	Columbus.

J. D. WELLS,	-	-	-	-	-	-	Cincinnati.
G. L. HECHLER,	-	-	-	-	-	-	Cleveland.
C. F. HALL,	-	-	-	-	-	-	Youngstown.
M. H. McCLAIN,	-	-	-	-	-	-	Galion.
D. R. ARNOLD,	-	-	-	-	-	-	Sandusky.

H. C. COOK,	-	-	-	-	-	-	Columbus.
C. T. P. FENNEL,	-	-	-	-	-	-	Cincinnati.
L. SOLLMANN,	-	-	-	-	-	-	Canton.
J. D. LISLE, M. D.,	-	-	-	-	-	-	Springfield.
C. D. KERR,	-	-	-	-	-	-	Gallipolis.

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Allen	H. Bracelin.....	Bluffton.	Logan	F. S. Case	Bellefontaine
Ashland	W. L. Rhoads	Ashland.	Lorain	H. J. Eady	Elyria.
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Athens	E. R. Lash	Athens.	Madison	Q. Bradley	West Jefferson.
Auglaize.....	J. L. Hoffman	New Bremen.	Mahoning ..	C. F. Hall	Youngstown.
Belmont	J. V. Fisher	Morristown.	Marion	E. C. Walt	Marion.
Brown	S. J. Fitzpatrick ..	Fayetteville.	Medina	W. H. Albro	Medina.
Butler	G. Doeller	Hamilton.	Meigs	A. W. Seeborn ..	Pomeroy.
Carroll	L. Sollman	Canton (Stark Co.)	Mercer	John Bevan	Mendon.
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Clarke	F. Coblenz	Springfield.	Monroe	J. W. McKimmie ..	Clarington.
Clermont	J. C. Bleher	New Richmond.	Montgomery	J. G. Spengler ..	Dayton.
Clinton	G. W. Brown	Wilmington.	Morgan	John Alexander ..	McConnellsville.
Columbiana.	J. C. Bolger	Salem.	Morrow	J. L. Swingle....	Mt. Gilead.
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Crawford ..	M. D. Fulton	Bucyrus.	Noble	J. T. Dew	Summerfield.
Cuyahoga ..	Lewis C. Hopp	Cleveland.	Ottawa	E. C. Payne	Port Clinton.
Drake	J. G. Stierle	Versailles.	Paulding ..	N. G. Woodward ..	Defiance.
Defiance	N. G. Woodward.	Defiance.	Perry	P. S. Taggart	New Lexington.
Delaware	F. J. R. Pfiffner ..	Delaware.	Pickaway ..	S. B. Evans	Circleville.
Erie	W. M. Melville	Sandusky.	Pike	H. Adams	Waverley.
Fairfield	E. B. White	Lancaster.	Portage	H. Waterman	Ravenna.
Fayette	H. Boyer	Washington C. H.	Preble	J. E. Davis	West Alexander.
Franklin	W. R. Ogier	Columbus.	Putnam	W. W. Kelley	Ottawa.
Fulton	C. J. Nachtrieb ..	Wauseon.	Richland ..	M. V. B. Finrock ..	Mansfield.
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Hamilton	C. P. Rendigs	Cincinnati.	Shelby	C. Amann	Sidney.
Hancock	W. H. Haven	Findlay.	Stark	L. Sollman	Canton.
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Harrison			Trumbull ..	F. M. Woods	Warren.
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Huron	M. Patrick	Norwalk.	Warren	H. Reid	Lebanon.
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Jefferson	Thos. Johnson	Steubenville.	Wayne	J. R. Sturges	Dalton.
Knox	P. A. Baker	Mt. Vernon.	Williams ..	W. M. Denman	West Unity.
Lake	W. M. Werner	Painesville.	Wood	A. R. Champney ..	Perrysburg.
Lawrence ..	T. C. Davis	Ironton.	Wyandot ...	J. H. Von Stein..	Upper Sandusky.

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—OF THE—
OHIO BOARD OF PHARMACY

APPOINTED BY HIS EXCELLENCY,
THE GOVERNOR OF OHIO.

W. R. OGIER,	- - - -	Columbus,	- -	Term expires	1892
E. M. HATTON,	- - - -	Zanesville,	- -	"	1891
F. T. BOWER,	- - - -	Toledo,	- -	"	1890
JOHN WEYER,	- - - -	Cincinnati,	- -	"	1889
J. A. NIPGEN,	- - - -	Chillicothe,	- -	"	1888

OFFICERS.

E. M. HATTON, *President.*

F. T. BOWER, *Vice President.*

J. A. NIPGEN, *Secretary and Treasurer.*

The regular meetings of this board are held in—

CINCINNATI, the second Monday of January.

COLUMBUS, the second Monday of May.

CLEVELAND, the second Monday of October.

→*DELEGATES.*←

Delegates to the American Pharmaceutical Association,

To be held in Cincinnati, O., September 5th, 6th, 7th and 8th, 1887.

JOHN GREYER, Akron.

M. V. B. FINFROCK, Mansfield.

W. M. MELVILLE, Lima.

THEO. TROUPE, Springfield.

J. C. BOLGER, Salem.

Alternates.

H. BOYER, Washington, C. H.

T. D. MCFARLAND, Canton.

J. H. GUTHRIE, Conneaut.

S. W. McKEOWN, Youngstown.

M. A. BURKHARDT, Dayton.

Delegates to National Wholesale Druggists' Association.

N. ASHLEY LLOYD, Cincinnati.

DANIEL MYERS, Cleveland.

G. B. KAUFMAN, Columbus.

E. SACHS, Dayton.

W. J. M. GORDON, Cincinnati.

NINTH ANNUAL MEETING
OF THE
OHIO STATE PHARMACEUTICAL ASSOCIATION.

FIRST SESSION. *Wednesday morning, June 8, 1887.*

The ninth annual meeting of the Ohio State Pharmaceutical Association was held at Akron, O., in the City Council Chamber, and called to order by President Coblenz at 11 A.M. On motion the roll call and reading of the minutes were dispensed with.

G. W. Voss, Chairman of Executive Committee, read the names of fifty-nine applicants for membership.

On motion, the Executive Committee was ordered to post the names of the applicants in some convenient place for inspection by the members, and that the candidates be ballotted for at afternoon session.

The Vice President, C. N. Nye, of Canton, being called to the chair, President Coblenz read his address.

PRESIDENT'S ADDRESS.

To the Members of the Ohio State Pharmaceutical Association :

Another year since our eighth annual meeting has elapsed, bringing us again together from our accustomed posts of duty, not only to renew old friendships with pleasure and recreation, but to exchange ideas of both scientific and trade interests. We must come willingly prepared to impart, as well as to receive information, striving to promote true pharmaceutical progress and the welfare of our Association.

In this particular I cannot urge too strongly upon your attendance and close attention to the reading of papers, and let every member come forward and participate in the discussions; these, although occupying a very little time, form the most valuable and instructive part of our meetings. After this is over you will find ample opportunity for the full enjoyment of the programme offered by our hosts. Our membership ranks among the first in size compared to our sister associations, and I do not think stands in the rear in ability; but the interest and value of its meetings

lays entirely with you. Our increase in membership is a singular one. According to our Secretary's last report, up to the present meeting we now have a total of 910 members, with a total loss of 91 from deaths, resignations and dropped from roll, which I consider a very satisfactory showing after an existence of eight years. The place of meeting and probably attractions may account for the irregular increase of members. Starting in Columbus in 1879 with total of 45.

Members elected in 1880, at Dayton.....	147
“ “ “ 1881, “ Toledo.....	142
“ “ “ 1882, “ Zanesville.....	154
“ “ “ 1883, “ Cleveland.....	126
“ “ “ 1884, “ Cincinnati.....	234
“ “ “ 1885, “ Sandusky.....	77
“ “ “ 1886, “ Springfield.....	81

Gentlemen, we must not allow this decrease to continue, as the older we become, the greater the loss. We want members in every town, large and small, who will attend and lend their assistance; then we will find a lessening of the disposition toward ill-feeling, and the tendency among the profession to cut prices, thus lowering the business to the level of common tradesmen. We must not allow our interest to lax, we must make our meetings as interesting and entertaining as possible, take hold of our new members and push them forward in order that they may not help but take an interest. In addition I would urge upon every member to provide himself with blank applications and take pride in securing new members whenever possible. The field is large and we represent but a portion of the pharmacists of Ohio. It is a duty that every registered pharmacist owes to himself and his calling to become a member of the State Association. It is not for the benefit and advancement of a few; it is making earnest efforts to elevate and protect your profession, and its great work has just begun. Inroads are being attempted upon every side; we must be upon the alert, and by our combined efforts protect legitimate business. The objects of our Association are for the elevation of the practice of Pharmacy by the dissemination of knowledge and maintenance of its dignity, interchange of ideas upon practical subjects, sustaining our Board of Pharmacy, maintenance of fraternal relations with our sister organizations, securing legislation relative to the proper interests of Pharmacy and the promotion of sociability and harmony among our city and town pharmacists.

Our membership has been diminished by the death of seven of our co-laborers who have been called from us to pass into that mysterious land beyond. I refer to E. Bixel, of Cleveland; E. Kistner, A. Wagner, H. F. Reum, of Cincinnati; J. F. Uthe, of North Amherst, S. J. Nicolay, of Hamilton, and P. F. Sherrick, of Delphos.

We also sustain a slight loss by resignations and members dropped from roll.

An Association the size of ours cannot be conducted without financial support. Its financial prosperity is of first importance and in view of the delinquency and loss of members, we should feel it our duty to remit promptly upon receipt of

notice of our annual dues, which certainly are small enough, and their neglect on this account would certainly be inexcusable. If you are unable to attend our meetings you should be willing to encourage the good work now progressing by prompt payment of your \$1.00 per year. In the work of collection of dues our efficient Treasurer has labored faithfully with but partial success, and to assist him in the performance of this unpleasant task, I would recommend (in accordance with the suggestions of our Secretary and Treasurer), that the collection of dues be placed in the hands of some bank selected by the Treasurer, at Columbus. This will not incur more expense than that of printing and sending out one or more notices to each member, who then is liable to lay it aside to be forgotten.

I would recommend that our Committee on Papers and Queries be also entailed with the duty of that of a Committee on Adulterations and Deteriorations, noting all new sophistications and substitutions of drugs that occur in the open market; also empower them to consult with manufacturers in the name of the Association regarding points of general information, when needed; this to be done not for purpose of exposing those who, by carelessness, accident or design, falsify goods, but to warn our members wherein to be upon their guard against this fast increasing evil. I would also note that information of this nature would add vastly to the practical value and interest of our annual proceedings. If the work would be considered too much for our Committee, let its numbers be increased accordingly.

During the past year the passage and enforcement of the Dow Law has caused much trouble and annoyance, not only to members of our Association, but to Pharmacists throughout the State generally. In Youngstown, Akron, Toledo, Mansfield, various schemes were devised whereby liquor and compounds of it were obtained from several local pharmacists, and then summoned to pay the license and in many cases the penalty. The unfortunate feature of this law is, that it fails to discriminate clearly and leaves many in the doubt. Generally and more especially in the larger cities the pharmacists, have restricted the sale of liquors exclusively to the prescription. Under present conditions it is advisable for pharmacists, except where the amount of liquors sold justified it, to restrict the sale of it entirely, except on prescription. This law casts odium upon the pride of our profession, yet we must bear in mind that the better must suffer with the unprincipled (or whiskey element druggist) of which latter class there are still some to be found.

Of forty-nine States and Territories twenty-seven now have Pharmacy Laws, Colorado and Pennsylvania being the most recent. Pennsylvania, commencing with 1881, has been struggling along until recently it passed both houses and now stands a law. That of Indiana killed by the opposition of a certain class of their own Association.

Through the steady perseverance of our Committee on Legislation, the Bill amending Sections 4410-11 and 12 was passed, now vesting full powers to prosecute and enforce the law in our Board, whom we hope now will go forward and give their attention to its enforcement. The report of our Committee on Pharmacy Laws will embrace this subject more in detail. However, to our workers who have assisted in securing this amendment, and to our champions in the Legislature, our Association

owes a debt of gratitude. I would earnestly request the members to assist our Board in reporting all cases of actual violation of our Laws; however, be well satisfied that they are actually violating the laws before calling the attention of the Board.

The standard of our profession must be elevated and maintained, and to accomplish it we must strengthen and enforce our Pharmacy Laws, and give our due necessary encouragement to our Institutions of Pharmaceutic Education. That a wonderful amount of deficiency and incompetency exists among both applicants for pharmacists and assistants, is evident in the fact of the number of failures before our State Board. Perfection in Pharmacy is impossible, as it is so related to all the natural sciences that a perfect acquaintance with all is rare, yet a good practical experience in all the details with sufficient theoretical foundation, (such that he shall be able to read and criticise a prescription or pharmaceutical preparation accurately and give his reasons for preparing it one particular way or another,) is such as our Board requires, and must have its evidence, thus producing a better class of druggists and preventing incompetent persons from entering the trade. Yet we must not complain that our law does not place the management of the duties of our profession at once in the hands of the efficient; we must make the best of it and let time ferret out those incompetent ones who took refuge, by registering under the law. I hope our Board will now accomplish much toward suppressing many stores which have been carried on in open violation to our law. The Connecticut Pharmaceutical Association has deposited on interest a permanent fund, thus enabling the Association to be run on a sound financial basis. In view of this I would recommend that the Association take from the funds of the Treasurer, whenever found feasible, without detriment to our finances, any amount that might be spared per year and place it in the hands of trustees of a permanent fund. This at first may seem impossible, but I think it will not be so difficult if our Treasurer is assisted in the collection of his annual dues. Also in addition to the above I would recommend the adoption of the plan of life membership, which, in the Missouri State Association, they have placed at \$10.00. I have no doubt that many of our members would gladly avail themselves of this plan to avoid ever being in arrears for dues.

In many sections of our State the local pharmacists have been annoyed by the drug pirate who is still to be found, without honor and standing, a nuisance to the public and a curse to legitimate trade. I would suggest to local druggists, in places where size admits, again, the time-worn subject of the formation of local organizations, whenever and wherever possible, for your mutual protection. Our field is fast becoming more and more limited. Many pharmaceutical manufacturers are, through extensive advertising and presenting to physicians elegant appearing preparations ready for dispensing, leading to the almost exclusive dispensing of medicines by physicians themselves, especially so in smaller cities. Continuing this way, apprehensions may be entertained as to the future of Pharmacy, its dignity being leveled by the supplanting of scientific investigation by a submission to quackery.

There is another feature I would incidentally mention; that is, that many of the registered pharmacists and assistants fail to display their Certificates of Registration;

many from my personal observation have theirs laid away, never to be had or seen, unless searched for, and in some cases lost.

I wish to remind you that in two years steps will be taken for the revision of the United States Pharmacopoeia of 1890. This work devolves mainly upon our Committee, still I request the assistance of our members when our Committee calls upon them for any information, whether statistical or practical. Should they desire any radical changes, these should be brought up and fully discussed at our next meeting. This work is one of the highest and most honorable duties devolving upon the scientific abilities of our Association, hence we must soon condense our practical views upon this subject.

At the Providence meeting of the American Pharmaceutical Association, it was decided to increase their standing committee on Unofficial Formulary, by the selection of one member from each State Association. In accordance with this I was requested to appoint some Ohio member. I selected our Secretary, Mr. Hopp, whose appointment I am certain will meet your approval. This work, embracing the entire country in this manner, will undoubtedly result in great practical value to us all.

I beg leave to suggest that the Nominating Committee confine their nominations, especially that of President, First Vice President, to members living either in the city or counties adjoining the place of meeting. I believe it has been customary to select from our Association such members as belonged to the American Pharmaceutical Association, as delegates to its meetings. I would, however, recommend that in accordance with some of our sister Associations, that we hereafter appoint as delegates from our numbers those who are not members of the American Pharmaceutical Association, for in this action they are virtually elected members, being then only requested to sign the constitution and by-laws and pay the usual membership fees and annual dues.

In accordance with a suggestion made by Secretary Holmes, of the New York Pharmaceutical Association, all State Secretaries attending the meeting of the American Pharmaceutical Association, at Providence, R. I., last fall held an informal conference for the purpose of bringing up the subject of a yearly conference of State Secretaries, in connection with the American Pharmaceutical Association, for the purpose of discussing the best ways and means for conducting the business of State meetings and considering the condition of matters in the various States with a view to a move of general understanding of the affairs of each State in its relation to the general welfare of the whole. Such meetings would be of much benefit to the Secretaries individually in better fitting them to perform the duties of their offices. Also that our Association would work in accordance with, and assist one another in the accomplishment of many objects long striven for. The following resolution was adopted:

"Resolved, That a committee of three, consisting of Secretaries Holmes, Colcord, and Upson, be appointed to confer with the Secretaries now present as to the desirability of such a departure, and also to present the proposed plan to the Presidents of all State Associations, soliciting their opinion and co-operation."

I would therefore recommend to the consideration of this Association the advisability of a favorable action upon this important subject, and hope you will lend it your hearty support. As each Association will necessarily bear the traveling expenses of their Secretary, I will leave this for your future consideration.

During last March, P. H. Bruck's time expiring as member of our Pharmacy Board, and it being necessary to appoint another member to fill the vacancy caused by the resignation of Chas. Huston, as candidate on this said Board, I appointed Mr. W. R. Ogier, of Columbus, to fill the vacancy. I hope the acceptance of Mr. Huston's resignation and the appointment of Mr. Ogier, will meet the approval of the Association.

I would suggest that our Paper and Query Committee and Secretary be not burdened with the duty of furnishing copies of all the papers to such few representatives of the journals as might be present at the meeting, since it is doing great injustice to *all* in thus allowing a *few* such privileges. Hence, let our papers go direct to our Proceedings, which should be out as soon as possible, and then all may have equal opportunities of selecting and publishing such as they may desire. Our Proceedings, also, would then not be so old and familiar, and would be preserved instead of consigned to the waste basket.

I recommend an alteration to Article 7, Chapter II, under our By-Laws. It reads thus:

"Pharmacists, chemists, and other scientific men, who are, or have been active members of this Association, and have removed from the State of Ohio, may be elected to associate membership. He shall not be required to contribute to the funds of the Association, etc."

The alteration, as I suggest would be to read thus: Pharmacists and chemists and other scientific men, who are, or have been active members of this Association, and have removed from the State of Ohio, shall be regarded as an associate of this Association. This would relieve our officers from any annoyance regarding collection of dues at once, instead of deferring it to an annual meeting for his election as an associate member.

I take pleasure in noting the receipt of a cordial invitation to attend the Minnesota Association meeting, which, unfortunately, I was unable to attend. It would be a pleasant feature if our officers could attend the meetings of sister Associations. However, the annual conference of State Secretaries, should it be adopted, will fully provide for this.

An idea was suggested to me lately by our Secretary, which I think, if carried out, will undoubtedly serve as a new and interesting departure. An exhibition of different pharmaceutical preparations, both pharmacopoeia and miscellaneous, prepared by different ones from among our members with estimates of their cost attached, will be of special interest and benefit to us all. This will also aid in the dissemination of new ideas. There are many new and valuable points that can be brought out and exhibited in this way, that will be practical and attractive, and consequently increase the interest and attendance at our meetings. I think it will be assisting a step in the right direction in that of encouraging our pharmacists in the manufacture of their own pharmaceutical preparations. One of the last admonish-

ments our students receive before leaving our Pharmacy Colleges is, "rely upon your own abilities and manufacture your own pharmaceuticals." The objects of pharmaceutical education are mainly for this very purpose. Yes, we should encourage this point as far as is in our power, that our coming generation may be pharmacists in every sense, and not mere tradesmen. I therefore beg leave to recommend the appointment of a committee of five, from different sections of the State, whose duty it shall be to secure exhibits of Pharmacopœia and miscellaneous preparations, (with their cost of manufacture attached,) from among our members, and that such preparations shall be of their own manufacture. I would also suggest, if the above is adopted, that those exhibits be placed in the meeting hall, thus removing the difficulty of inducing members to attend the meetings while exhibits, as we now have them, are in progress.

From our several committees I expect good reports. Among these, our first report from the Committee on Progress of Pharmacy, which undoubtedly will add much to the value and interest of our proceedings. Our Paper and Query Committee have labored faithfully in the performance of their ever increasing duty.

I observe the offer of a third prize for a meritorious paper. Stimulants like this should call forth many and valuable articles. The thanks of the Association are due Mr. Burton, for this offer; also to Messrs. Benton, Myers & Co. for the continuance of their offer.

Our Permanent Secretary deserves the thanks of the Association for the prompt and careful administration of its intrusted affairs, devoting time and labor which most of us would certainly feel unwilling to devote.

The local Secretary has worked hard to make the meeting successful and entertaining, and no doubt will be eminently successful.

Now, fellow members and friends, I will soon relinquish the trust which one year ago you kindly placed in my hands. To be chosen as the presiding officer of this, one of the largest State Associations, I deem an honor which I could never have expected. For all this I thank you and our brother officers for your kind assistance and encouragement which has made the discharge of my official duties agreeable and pleasant, and shall always be a source of pleasant recollections. During the remaining few days of my official duties I request you to kindly forbear with me in any errors of judgment I may commit, as they certainly will not be intentional. While hoping that the past success and prosperity of this Association is but the beginning of a still greater future, I bid you farewell.

On motion, Vice President Nye appointed Messrs. J. Weyer, Cincinnati; J. H. Case, Akron, and M. D. Fulton, of Bucyrus, committee to report on the President's address.

The Secretary read his report.

SECRETARY'S REPORT.

Mr. President and Members of the Ohio State Pharmaceutical Association :

Gentlemen—After adjournment last year, a synopsis of our meeting was sent to the various Pharmaceutical journals. Newly elected members were notified and certificates of membership issued to each one. The publication of the report was somewhat delayed by the preparing and adding to the report, of an alphabetical list of members.

The County Correspondence Committee did their work well and promptly. The reports were distributed the same as the year previous. A copy was sent to the President and Secretary of each State Association and to each Pharmaceutical journal. Complimentary copies were received from each Association.

The usual annual notice was sent out about two weeks before the meeting.

Respectfully submitted,

LEWIS C. HOPP,

Secretary.

AKRON, June 8, 1887.

On motion, report was accepted.

The Secretary read the Treasurer's report.

TREASURER'S REPORT.

To the Officers and Members of the Ohio State Pharmaceutical Association :

GENTLEMEN: Your Treasurer submits the following report for the past year:

1886.

RECEIPTS.

June 1.	To balance cash on hand.....	\$ 19 34
July 1.	To cash received from Exec. Com. (new members)..	283 50
July 1.	To cash received from Exec. Com. (certificate)....	50
July 1.	To cash received from Executive Committee (dues).	180 00
July 1.	To cash received for certificates.....	2 00

1887.

June 2.	To cash for dues to date.....	524 00
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— \$ 1,009 34

1886.

EXPENDITURES.

June 9.	By bill, A. G. Black & Co.....	\$ 50 00
June 9.	By bill, Theo. Troupe.....	6 40
June 9.	By bill, G. W. Voss.....	7 70
June 15.	By bill, Leader Printing Co.....	35 00
June 15.	By bill, L. C. Hopp.....	66 03
June 21.	By bill, Nitschke Brothers.....	17 25

July 1.	By bill, V. Coblenz.....	8 87	
July 8.	By bill, L. C. Hopp.....	200 00	
July 8.	By bill, A. A. Clark.....	20 25	
July 8.	By bill, Pomerene, Davies & Hibbard.....	59 15	
July 8.	By bill, Charles Huston.....	4 25	
Oct. 11.	By bill, Nitschke Brothers.....	3 75	
Oct. 26.	By bill, Dr. D. Barringer.....	2 00	
Nov. 30.	By bill, Leader Printing Co.....	335 45	
Nov. 30.	By bill, L. C. Hopp, Secretary.....	45 34	
1887.			
Feb'y 2.	By bill, Joseph Feil.....	16 50	
March 8.	By Bill, Nitschke Brothers.....	2 75	
May 24.	By bill, Nitschke Brothers.....	2 75	— \$ 883 44
Balance on hand.....			\$125 90

Respectfully submitted,

CHARLES HUSTON,

COLUMBUS, Ohio, June 3, 1887.

Treasurer.

On motion of Mr. Nye the report was referred to an auditing committee of three. The President appointed Messrs. G. L. Hechler, M. D. Fulton and J. I. Beck.

Geo. W. Voss, Chairman of Executive Committee, read their report.

EXECUTIVE COMMITTEE REPORT.

To the Officers and Members of the Ohio State Pharmaceutical Association:

GENTLEMEN: Your Executive Committee beg leave to submit to you their report for the past year. Through the kindness of our Secretary, we were relieved from the duty of publishing our annual transactions. He had the work executed in a very creditable manner and it presents a neat appearance. The Treasurer's report shows a larger surplus on hand this year than we had last, which is certainly very gratifying and proves the financial affairs of the Association to be in a prosperous condition.

The efforts of our local Secretary and the Special Committee appointed by him, have enabled us this year to add an exhibit to the attractions of the convention that reflects great credit upon the gentlemen having it in charge.

The Pharmacy law, as amended since our last meeting, empowers the State Board of Pharmacy to bring suit through the county prosecuting attorney against any person infringing it.

We would suggest that our meetings in the future commence no later than Tuesday, as the members remaining to enjoy the entertainment which usually follows

the day of our adjournment, will then be spared the annoyance and inconvenience of returning home on Sunday.

Eighty-one new members were added to the roll at our last meeting, a fact very pleasant to contemplate, as it not only shows that our labors have the approval of the profession of the State, but also proves that there is a desire among pharmacists to join in the advancement of scientific pharmaceutical knowledge and the elevation of the profession.

Again we are called upon to mourn the loss of some of our members. Since our last meeting seven have passed to their eternal home, highly honored and respected, in their several places of abode, their loss is greatly felt; but the influence of their example still lives to point the way to honor and esteem, and urge us on to renewed efforts in the work we are called upon to perform. That when the hour of our departure shall arrive, we also may be found ready and worthy to receive that blessed commendation, "Well done, thou good and faithful servant."

Respectfully submitted,

GEO. W. VOSS,
D. R. ARNOLD,
THEO. TROUPE.

AKRON, O., June 8, 1887.

EDWARD CHRISTIAN KISTNER, of Cincinnati, O.,

Was born in Hanover, Germany, August 26, 1844. He came to this country with his parents when eleven years old. They settled in New Bremen, Ohio. When sixteen years old he entered the drug business as clerk, in the employ first of Mr. Carl Backhaus, of Cincinnati, and then with his father. At the age of twenty-two he commenced business for himself. This he carried on at several localities until his death, which occurred September 22, 1886, age, forty-two.

Deceased was a member of the A. O. U. W. and the Turner Verein. A widow and one son is left to mourn his loss. He joined the Association in 1884.

JOHN FREDERICK UTHE, of North Amherst, O.,

Was born in Cleveland, O., August 21, 1846. He was raised in North Amherst. In 1863 he entered the employ of W. F. Wooster, druggist of Elyria, Ohio, and remained until 1865, when he returned to North Amherst and commenced the study of medicine. In 1872 he started in the drug business in that place, and two years after he entered into a co-partnership with Mr. Clements. He remained in the firm until 1875, when he removed to Cleveland, returned again in 1877, and engaged in the drug business. In 1885 Mr. E. Nichols was admitted into partnership. He continued in business until his death November 10, 1886. He was married in 1868. He was a thorough and conscientious business man, beloved by the community who honored him with several public positions.

He was a member of the American Legion of Honor and Knights of Pythias. He became a member of the Ohio State Pharmaceutical Association in 1884.

AUGUST WAGNER, of Cincinnati, O.,

Was born in Hanover, Germany, January 6, 1818. He left high school when fourteen years of age and served an apprenticeship of five years in Noerton bei Goettingen. From there he went to Hamburg, and in 1842 sailed for America. He first came to New Bremen, Ohio, and opened a pharmacy. After remaining there one and a half years he went to Cincinnati, and there opened a pharmacy. In 1866 he entered the wholesale firm of Vogeler, Wagner & Co., but in 1881 withdrew and opened a retail pharmacy, which he conducted until the day of his death, which occurred December 13, 1886. During the number of years of his life spent in this city, he, by his natural urbanity, uniform courtesy and gentlemanly deportment, gained hosts of friends, and all who became acquainted with him respected and loved him for his many good qualities of head and heart. He leaves a widow, two sons and three daughters. He joined the Ohio State Pharmaceutical Association in 1882.

SILAS J. NICOLAY, M.D., of Hamilton, O.,

Was born in Somerset county, Pennsylvania, February 8, 1847. He attended school until fourteen years old, and then served an apprenticeship of three years with a silversmith. In 1864 he entered the 107 Regiment of Pennsylvania Veteran Volunteers, and served until the close of the war. While in the service his regiment participated in many serious engagements. He came to Ohio in 1865; attended school at Lebanon, and then taught in Butler and Hamilton counties. He afterwards studied medicine and graduated at the Medical College of Ohio, in 1874. He practiced in Illinois until 1880, when he removed to Hamilton, Ohio, and purchased a drug store, which he continued to carry on until his death May 11, 1887. He leaves a wife and one child. He was a Mason and Odd Fellow and a member of the G. A. R. He became a member of the Ohio State Pharmaceutical Association in 1882.

H. F. REUM,

Born in Hamburg, Germany, January 13, 1837, his parents removing shortly after to Kassel, where he received his earlier education and studied chemistry under the noted Prof. Schwartzkopf. Left Germany for America in 1856, coming to Cincinnati; continued his studies under the late lamented Prof. Fennel, and after, under Mr. Karrman, of this city. In 1860 he purchased the pharmacy corner John and Clark, and soon after removed to corner of Fifth and Broadway, where he remained as one of the leading pharmacists of this city. He was President of the Cincinnati College of Pharmacy in 1879. Died May 31, 1887. He joined the Ohio State Pharmaceutical Association in 1881.

EMIL BIXEL, of Cleveland, O.,

Died September, 1886. He became a member of the Ohio State Pharmaceutical Association in 1880.

P. F. SHERRICK, of Delphos, O.,

Died the same year he became a member of the Association, in 1886.

On motion the report was accepted.

The Secretary read the report of the Committee on Trade Interest.

COMMITTEE ON TRADE INTERESTS.

To the Officers and members of the Association :

Your Committee would report that the past year has not been an eventful one to the drug trade. Cutting in prices has been found to be unremunerative to those who hoped by that means to capture their neighbor's patrons and has been almost entirely abandoned throughout the State.

The beneficial effects of the Pharmacy Law are being felt, and as it becomes better understood and its provisions more fully enforced, we think it will prove as great an advantage to the trade as was expected by its friends.

The rapid multiplication of patent medicine is becoming a serious annoyance to the trade, as the various schemes of advertising induce druggists to lay in a supply to meet the expected demand, which frequently never comes, and the result is shelves loaded with unsalable stock; and the same may be said in regard to many of the various remedies of the manufacturing chemist introduced to the notice of the physician who would like to try them, and recommends them to their druggist, who lays in a supply to his frequent sorrow and regret.

The liquor law known as the Dow Law, in its bearing on the drug trade has been the cause of some difficulty. Liquors used medicinally are a part of the druggist's business, and while your committee have no sympathy for those who turn their pharmacies into saloons, we think the restriction on its sale as medicine should not be limited to the prescription of a physician. This inconvenience is felt more severely in our smaller towns than in the cities, as many physicians are not in the habit of writing their prescriptions, simply telling their patients to send to the apothecaries for such remedies as they do not carry with them, and neither do many of our patrons think of applying to a physician for liquor any more than they do for camphor, peppermint or paregoric. The writer has been compelled more than once to send a customer to the neighboring saloon for liquor when he had been directed by his physician to go to the drug store for it, but failed to give his written order. Your committee are aware that it is a difficult subject to handle, but do not think it was the intention of our legislators to do any one an injustice, and think the law might be so amended as to allow the druggist to be the judge of its legitimate use, either by requiring the name of the buyer to be registered as in the purchase of poison, or the customer to sign a certificate that it is not to be used as a beverage.

The absence of speculation and the unusual steadiness of prices have enabled druggists to make a fair and legitimate profit, and the dullness of trade of the earlier portion of the year has been succeeded by a decided increase in volume of sales in

all branches of the business, so that your committee think that the year has been a satisfactory one to the trade in general.

Respectfully submitted.

C. B. JOHNSON, Middletown,
C. W. TOBEY, Troy,
C. A. SMITH, Springfield,

On motion, report was accepted.

Mr. Feil, Chairman of Committee on Papers and Queries read their report.

COMMITTEE ON PAPERS AND QUERIES.

Your committee prepared a list of queries and headed it with a special appeal for notes and list of preparations of the U. S. P., '80—rarely or never called for. This was given a prominent place in the proceedings by the Secretary, and hence it was deemed necessary to send out only one copy to each member additional, which was done in January. The committee also desire to call attention to the kindness of Messrs. Benton, Myers & Co., of Cleveland, in repeating their offer of last year of two prizes for answers to queries, namely: a Troemner Balance, list price, \$25, and a B. M. & Co. Suppository Mould, valued at \$8; also the kindness of Mr. G. F. Burton, of Springfield, Ohio, in offering as third prize a Burton Percolating and Filtering Apparatus, these prizes to be awarded by a committee appointed by the President.

The replies to the queries have not been so numerous as they were the past two years, but the quality of work has been of unusual excellence, and in this respect the committee feel well repaid for their labors.

The answers to the notes and special appeal for queries Nos. 1, 2 and 3, have been few, and at least in number not satisfactory.

JOSEPH FEIL,
W. SIMONSON,
H. C. COOK.

On motion, report was accepted.

Mr. Fulton read report of Committee on Pharmacy Laws.

COMMITTEE ON PHARMACY LAWS.

Mr. President and Gentlemen:

Your Committee on Pharmacy Laws found little work to perform during the past winter. There being no antagonistic legislation introduced towards our present law, hence our report will be brief.

You are aware of the passage of the amendment making the Pharmacy Board prosecutors of any reported violations of the law. With this addition we have the best law in the country, and your committee are of opinion that further amendments

at this time would not be politic. We advise the passage of a law excusing pharmacists from jury duty, and would urge each and every member to interest himself in the passage of the bill when it comes up the coming winter.

WM. M. MELVILLE,
J. A. NIPGEN,
CHAS. HUSTON,
F. M. HEATH,
M. D. FULTON.

On motion, report was accepted.

Mr. John Weyer read report of Ohio Board of Pharmacy.

OHIO BOARD OF PHARMACY REPORT.

In accordance with statutory provision the Ohio Board of Pharmacy, through its Secretary, submits its annual report for the year ending March 31, 1887, to the Ohio State Pharmaceutical Association.

During the year ending April 1, 1887, the Board held six meetings for the examination of applicants for registration, as follows: Columbus, May 10, 1886; Toledo, August 3, 1886; Cleveland, October 11, 1886; Columbus, November 23, 1886; Cincinnati, January 10, 1887; Columbus, March 1, 1887.

At these examinations two hundred and twenty-three appeared to register as Pharmacists, and one hundred and thirty-six as Assistant Pharmacists. Of these applicants one hundred and two received certificates of competency as Pharmacists, and forty-eight as Assistant Pharmacists, being 46 per cent. of the former, and 35½ per cent. of the latter.

Your attention has heretofore been called to the small percentage of successful applicants at these examinations, and the marked decrease in the ratio during the past year is no flattering comment upon the training and education of these aspirants, when you consider that the aim has been to make the test a practical rather than a theoretical one.

There must be a radical change in the views of the druggists of Ohio concerning the kind of material out of which they assist in manufacturing the Pharmacists of the future. The majority of the examination papers, even of those which show a fair degree of proficiency in Pharmaceutical skill, exhibit a lamentable ignorance of the elementary principles of a common school education. The idea appears to be, not "how high a degree of excellence can I attain in this my chosen line of work, but how 'little can I know to squeeze through the examinations of the Board of Pharmacy, and get a certificate to PRACTICE upon the people."

The "salts and senna" age in Pharmacy has gone by, and it has come to be a many sided science, the foundation for a fair comprehension of which must be laid in a mind that has had some previous training in habits of study and observation; and just so long as ignorant, uneducated boys are taken into drug stores as apprentices, and pushed forward as assistants as early as they learn the names and location

of common remedies in that one store, just so long will it be the duty of the Ohio Board of Pharmacy to weed out the incompetent young men who are crowding forward to secure legal recognition of their excessive ignorance.

The term of service of Mr. P. H. Bruck having expired April 1, 1887, Governor Foraker appointed Mr. W. R. Ogier, of Columbus, his successor. Mr. Bruck was a most valuable member of the Board, and retired with the highest esteem of his colleagues, to assume the duties of an important public office at the call of his fellow citizens.

The amendments to the Pharmacy Law enacted during the recent session of the Legislature, were valuable and timely, and will doubtless be brought to your attention by the Committee on Pharmacy Laws.

The board met for reorganization on April 1, 1887, and elected E. M. Hatton, President; F. T. Bower, Vice President, and J. A. Nipgen, Secretary and Treasurer.

The following financial exhibit will show the receipts and expenditures for the year, and the condition of the treasury at its close:

RECEIPTS.

Cash on hand April 1, 1886,	-	-	-	-	-	-	\$6,128 67
Cash received to April 1, 1887,	-	-	-	-	-	-	402 00
Total,	-	-	-	-	-	-	\$6,530 67

EXPENDITURES.

May 11—Zanesville Courier, printing questions,	-	-	-	-	-	30 50
E. G. Roberts, rent of office,	-	-	-	-	-	48 00
Senter & Lerch, mailing tubes,	-	-	-	-	-	1 40
Krebs Lith. Co., certificates,	-	-	-	-	-	18 00
J. H. Serco, printing,	-	-	-	-	-	1 75
Bow & Beggs, Linoleum,	-	-	-	-	-	20 48
J. H. Trange, blank book,	-	-	-	-	-	5 75
Hann & Adair, printing,	-	-	-	-	-	5 35
Com. College, rent for examination,	-	-	-	-	-	6 00
Oct. 11—E. G. Roberts, rent of office,	-	-	-	-	-	60 00
A. C. Bertin & Co., printing,	-	-	-	-	-	56 35
1887.						
January—Rent of hall for examination in Cincinnati,	-	-	-	-	-	20 00
A. C. Bertin & Co., printing,	-	-	-	-	-	34 75
Feb'y — L. T. Neal, legal opinion,	-	-	-	-	-	50 00
E. G. Roberts, rent of office,	-	-	-	-	-	72 00
Total,	-	-	-	-	-	\$430 33

F. T. Bower, per diem and expenses,	- - - - -	183 65
John Weyer,	- - - - -	190 81
Edgar M. Hatton,	- - - - -	219 70
J. A. Nipgen,	- - - - -	122 05
P. H. Bruck, salary for 15 months, \$625.00; do necessary expenses, \$134 33,	- - - - -	759 33
Total,	- - - - -	\$1,905 87
Balance on hand April 1, 1887,	- - - - -	4 624 80

Respectfully submitted,

JOHN A. NIPGEN,

Secretary.

On motion, report was accepted.

President Coblenz appointed the following Committee on Nomination of Officers for the ensuing year: Thomas Johnson, Steubenville; John Weyer, Cincinnati; A. Warner, Akron; J. H. Wahmhoff, Delphos; A. Hitchman, Bettsville; Phil Lehr, Cleveland; Fred Berg, Upper Sandusky; Prof. C. T. P. Fennel, Cincinnati, and W. H. Albro, Medina.

Mr. Voss read the names of nine applicants for membership.

On motion, adjourned until 2 P.M.

SECOND SESSION. *Wednesday afternoon, January 8, 1887.*

On motion, the minutes of the morning session, as read by the Secretary, were approved.

The President appointed Messrs. N. Rosewater, Cleveland; John Weyer, Cincinnati; Joseph I. Beck, Springfield, Committee on Prizes.

The Secretary read report of Committee on Unofficial Formulary.

NOTES ON UNOFFICIAL FORMULAS.

The Committee on National Formulary of Unofficial Preparations, appointed under the auspices of the American Pharmaceutical Association, give a preliminary draft as printed in the last proceedings, comprising of 407 formulas, 414 titles; of this number, 142 are Elixirs, 16 Emulsions, 10 Fluid Extracts, 10 Liniments, 44 Solutions, 17 Mixtures, 15 Powders and Compounds, 12 Spirits, 35 Syrups, 32 Tinctures, 14 Medicated Wines, including a few formulas for Pills, Pepsins, Oils, Lotions, Glycerites, Plasters, Collodion Compounds and Acids. One hundred and

three formulas, under respective titles, have 259 additional formulas, making the total number 558—the product of the Committee and Pharmaceutical Associations. The multiplicity of formulas and similarity from a chemical and therapeutical standpoint, is apparent, and when the stated revision takes place, the numbers will be lessened in a report to the coming meeting of the American Pharmaceutical Association. The gentlemen of the Committee and their co-laborers deserve the thanks of the Pharmacists of the country for their task in presenting formulas which have sprung into notoriety within a generation—some of merit, many of none; but nevertheless have become popular with the people and physicians through the agencies of designing manufacturers, at the expense of reputable Pharmacy, not only in this country, but abroad. A meeting of the Pharmaceutical Conference was held at Birmingham, England, last August, when a committee on unofficial formulary was appointed with the object, as termed, "To popularize elegant Pharmacy, in order to put it within the power of every chemist to compete on advantageous terms with many proprietary mixtures and syrups which are so widely advertised."

The National Formulary Committee make the following announcement: "That contributions and criticisms are solicited from members of the profession outside of the Committee, or from those located in states where no representative or member of the Committee resides." Therefore, remarks in regard to a few of the important formulas are in order. One-third being Elixirs, and of the greater importance to Pharmacists, and in which Poly Pharmacy is most apparent. The term, Elixir, as used at present, means a mixture of a pleasant tasting aromatic flavor, in combination with medicines, in order to disguise any disagreeable taste. An objection exists in the multiplicity of these flavors. Pharmacists only need a few reliable formulas for unofficial flavoring preparations. Three would be quite sufficient, one Aromatic Tincture prepared from spices, one Compound Orange Flavor prepared from fresh orange and lemon peel, coriander, etc., the same as Aromatic Spirit, an excellent flavor containing very little Tannin, and most useful; the third a Fragrant Spirit similar to the one recommended by Prof. Bennington, made from fresh essential oils and Alcohol, being devoid of Tannin, therefore appropriate for preparations containing Iron. The above Tincture or Spirit flavoring to be made into Elixirs, one part to two parts of syrup or syrup and water. An Aromatic Elixir being appropriate where the Tannin from spices may be desirable or not therapeutically objectionable. Being useful combined with astringents, tonics, griping purgatives, carminatives and corrective cordials. As a spice or aromatic Elixir, the Committee authorize Compound Elixir of Taraxacum, and give it as a flavoring for a number of Elixirs. Why dandelion root of no flavor, and wild cherry bark, a weak and unstable flavor compared to strong spices, should be mixed with the latter, cannot be sustained on rational grounds. These should be displaced with coriander seed, and anise added with the amount of cinnamon, and cardamon increased. First making the Aromatic Tincture.

AROMATIC TINCTURE.

Coriander,	240 grs.
Cinnamon,	240 grs.
Cardamon,	180 grs.
Canada Snake Root,	120 grs.
Carum,	120 grs.
Anise,	120 grs.
Cloves,	60 grs.
Nutmegs,	60 grs.
Glycerhiza, (Russian peeled and cut,)	960 grs.
Diluted Alcohol,	16 fld ozs.

Grind substances to No. 40 powder and percolate, adding water (after all of the diluted Alcohol has passed) until 16 ozs. of Aromatic Tincture is received.

AROMATIC ELIXIR.

Aromatic Tincture,	8 fl. ozs.
Syrup,	16 fl. ozs.

As stated, the aromatic spirit prepared from the fresh orange and lemon peel, as per No. 314, is the best formula that has yet been offered, suitable for making any kind of medicated Elixir, having no Iron in its compound. Fresh essential oils of orange and lemon are at times difficult to secure. This elixir made from the fresh peel is always satisfactory. The name Aromatic Spirit should be changed to Compound Spirit of Orange, and an Elixir prepared by mixing equal parts of this Compound Spirit, Syrup and water; filter. This Elixir should be titled Compound Elixir of Orange, and the Elixir having the same name, (No. 28) having extracts of Gentian, Wormwood, Buckbean, and other unpleasant tasting drugs, should not have the name of Compound Elixir of Orange, even if it is from the Pharm. term.

The third, Fragrant Spirit, an appropriate name, prepared from fresh essential oils.

FRAGRANT SPIRIT.

Oil of Orange,	6 fluid drachms.
Oil of Rose,	20 minims.
Oil Coriander,	1 fluid drachm.
Oil Bitter Almonds,	2 minims.
Oil Cloves,	2 minims.
Alcohol, qs.,	4 fld ozs.

Note—One-third, at least, of the oil of orange should be replaced by the oil of lemon, the flavor of the latter being always acceptable, and the cloves, by cinnamon, or by adding the last.

ELIXIR FRAGRANT.

Fragrant Spirit,	2 fld drachms.
Alcohol,	4 fld ozs.
Syrup,	6 fld ozs.
Water,	6 fld ozs.
Calcium Phosphate Precip.,	120 grs.

First pour into a bottle the fragrant spirit, add Alcohol, then phosph. calcium. Shake well, then add syrup; shake again; lastly water, and pass through a wetted filter. This Elixir should be used for all Elixirs or mixtures containing Iron; and often desirable as a change from the other Elixirs or Flavoring Spirits in the numerable preparations. The Adjuvant Elixir, (No. 17) could well be dispensed with, in not proving satisfactory, compared to others. Also Tincture Aromatic, (No. 367.) Anise, 10 drs., cinnamon, 1 tr. oz., coriander, 5 drs., caraway, 3 drs., dil. Alcohol to make 16 fld. oz. This preparation contains too great a proportion of anise for a popular Aromatic Flavoring. The Elixir Cinchona Bark and Detannated Elixir of Cinchona, preparations weak, and often of uncertain alkaloidal strength, should be replaced by Elixir Cinchona Alkaloids. The formula given by the Lancaster county, Pennsylvania, Pharmaceutical Association, although not strong, is definite in amount of alkaloids.

ELIXIR CINCHONA ALKALOIDS.

Quinine Sulphate,	18 grs.
Cinchonin,	6 grs.
Quinidia,	5 grs.
Cinchonidia,	3 grs.
Elixir of Orange,	16 fl. ozs.

One grain of Alkaloids to each tablespoonful. By increasing amount of Alkaloids, four times, would make 1 grain to each teaspoonful — the strength of most Elixirs containing one or more of the Cinchona Alkaloids.

For improving the taste of Elixirs containing bromides or hypophosphites of the alkalis or alkaline earths, it is recommended by the Committee that 30 grs. of Citric Acid be added to each pint.

The Pennsylvania and Wisconsin Committee recommend Powdered Talcum in the place of Precipitate Phosphate Calcium for clarifying through filters.

Compound Elixir of Chloral and Bromide Potassium, (No. 46.) Chloral and Bromide of Potassium, each 4 tr. oz., extract Cannabis (Indian), extract Hyoscyamus, each 16 grs.; water enough to make 16 fl. ozs. The resinous extract of Cannabis being insoluble in water, therefore useless after the preparation is filtered.

The above is supposed to represent "Bromidia," in having the same amounts of chemicals and drugs, excepting Alcohol, 2 fl. ozs. to dissolve the ext. Cannabis, and 14 fluid ozs. of water.

Formula No. 4, Diluted Glacia Phosphoric Acid: Glacia Phosphoric Acid 1 tr. oz. Aqua to make 10 fld. ozs.; necessary when Phosphate or Pyro-phosphate of Iron, U. S. P., is to be combined or dissolved in a mixture with Diluted Phosphoric Acid, the official tribasic acid being inadmissible.

Formula 5, Chloroform Water: Purified chloroform 30 min., distilled water 10 fl. ozs.; recommended as a preservative agent for keeping solutions free from micro organism.

The National Formulary Committee should print a formula for Solution of Chlorate of Potassium, kept by many apothecaries for a uniform proportion of Chlorate of Potassium, 1 tr. oz. to water 16 fl. ozs.

Formula 174, Emulsion of Turpentine: Comprising oil of Turpentine, powdered Acacia, syrup and water. Mode of preparation recommended. Pour the oil of Turpentine into a bottle of size required, cork and agitate so as to oil inside of bottle; then add Acacia and shake again. Finally, add syrup and water; mix thoroughly by shaking. A note states that "this is not a true Emulsion and will separate on standing," which is certainly correct.

The writer has for years made satisfactory Emulsions in the following manner: Pour the amount of any oil ordered, into a bottle of size required, adding as much water as there is oil; set aside; then place into mortar the Acacia; sugar, if wanted, adding only sufficient water to make quite a thick mucilage, smoothly worked. Then shake oil and water in a thorough manner until quite milky in appearance; then quickly pour this into the mucilage, stirring it in active manner before the oil and water has time to separate, which should also be added to mucilage in successive portions, keeping up shaking during intervals.

In prescribing an Emulsion of Turpentine, if physicians would order an equal amount of a fixed oil of sweet almonds or olive oil, to that of oil of turpentine, a more satisfactory Emulsion could be secured both mechanically and therapeutically.

JACKSON'S COUGH SYRUP NO. 1.

Morphia Hydrochlorate,	- - - - -	4 grs.
Oil Sassafras,	- - - - -	2 minims.
Syrup Acacia,	- - - - -	16 fld ozs.

The above formula originated in Philadelphia, but in many sections of Northern and Middle States Jackson's Cough Syrup, (Compound Syrup of Morphia,) is quite in demand. For this the following formula should be published:

JACKSON'S COUGH SYRUP NO. 2.

Fluid Extract Ipecac,	- - - - -	½ fluid drachm.
Fluid Extract Seneza,	- - - - -	2 fluid drachms.
Fluid Extract Rhubarb,	- - - - -	2 fluid drachms.
Morphia Muriate,	- - - - -	4 grs.
Syrup,	- - - - -	16 ozs.
Oil Sassafras,	- - - - -	16 drops.

AROMATIC VINEGAR.

Oil of Lavender,	- - - - -	4 minims.
Oil Rosemary,	- - - - -	4 minims.
Oil Juniper,	- - - - -	4 minims.
Oil Cinnamon,	- - - - -	4 minims.
Alcohol	- - - - -	3 fluid ozs.
Acetic Acid,	- - - - -	4 fluid ozs.
Water, qs.,	- - - - -	16 ozs.

Note—The oils of Juniper and Peppermint are objectionable. Preparation is weak in perfumes, also Alcohol, and too strong in Acetic Acid. The following formula of Aromatic Vinegar will prove satisfactory:

AROMATIC VINEGAR.

Oil of Lemon,	-	-	-	-	1 fluid drachm.
Oil Lavender,	-	-	-	-	½ fluid drachm.
Oil Rosemary,	-	-	-	-	10 drops.
Oil Cloves,	-	-	-	-	10 drops.
Camphor Gum,	-	-	-	-	1 drachm.
Tr. Benzoin,	-	-	-	-	2 fluid drachms.
Tr. Orris,	-	-	-	-	2 fluid drachms.
Tr. Tonka,	-	-	-	-	2 fluid drachms.
Alcohol Stronger,	-	-	-	-	8 fluid czs.
Acetic Acid,	-	-	-	-	2 fluid czs.
Rosewater qs.,	-	-	-	-	16 ozs.

Dissolve oils and Camphor in Alcohol; add Acetic Acid; lastly Rosewater; shake, let stand a few days and filter.

WINE OF COCA.

Fluid Extract Coca,	-	-	-	-	1 fluid oz.
Alcohol,	-	-	-	-	1 fluid oz.
Claret, (or any palatable wine,)	-	-	-	-	14 fluid ozs.

Dr. Chas. Mitchell, after investigating five different popular Wines of Coca, found the average quantity of Alkaloid to be from 0.16 to 0.18 $\frac{1}{100}$ to the fluid ounce, corresponding from 25 to 28½ grs. of Coca leaves assaying 0.65 $\frac{1}{100}$ of Alkaloid. A prominent foreign brand showed 0.12gr. of Alkaloid to the fluid oz. He suggests that Coca Wine be made to represent, as above, 30 grs. of the drug to the fluid oz., corresponding to about 4-5 grain of Alkaloid, if the Coca leaves are of superior quality. This strength allows from half to one wine-glass full being administered. In administering Wine of Coca, Dr. Hammond, it is stated, recommends Hydrochlorate of Cocaine grs. 2, to Wine 16 fl. ozs. Others give 3 grs. of the Alkaloid to 16 fl. ozs. In order to improve the flavor of the Wine, mix Elixir of Orange 2 fl. ozs. to 14 fl. ozs. of Wine.

Respectfully submitted,

CINCINNATI, June 7, 1887.

J. D. WELLS.

On motion, report was accepted.

Mr. Voss read report of Committee on Tax on Alcohol and Liquor License.

REPORT OF COMMITTEE ON TAX ON ALCOHOL AND LIQUOR LICENSE.

Gentlemen—Your committee hereby respectfully present the following report and "petition" for the amendment of section 3246, pertaining to special taxes of the internal revenue laws of the revised statutes of the United States:

To the Honorable Members of the Senate and House of Representatives of the United States:

Through M. C., District, Ohio,
..... U. S. Senator.

The petition of the undersigned *Apothecaries* of....., in the State of Ohio. The internal taxation enacted by the General Government during the War, was created in order to meet a large indebtedness. Said taxation maintained in time of peace, results in the accumulation of an unnecessarily large surplus in the National Treasury. This condition calls for the abolishment of Special Taxation at present levied upon certain business interests. We, therefore, respectfully ask an amendment to Section 3246, which reads in part, viz.:

"Nor shall any Special Tax be imposed upon apothecaries as to vinous or spirituous Liquors which they use exclusively in preparation or in making up medicines."

We respectfully request that by amendment the following sentences be added after the word "medicines" to section quoted above, viz.:

"Nor as to prescriptions written by physicians and the sale of Alcohol for arts and domestic uses or general manufacturing purposes, otherwise than for re-distilling, rectifying or compounding of spirituous Liquors."

Whereas, under existing section 3246, no apothecary is permitted to supply to the sick, wines or liquors upon physicians' prescriptions, or to sell Alcohol at retail for domestic uses, etc., without the payment of a tax of twenty-five dollars (\$25.00) per annum to the General Government.

For these reasons we pray that you will take special interest in having the above amendment adopted.

AMENDMENT TO THE DOW LAW.

To the Honorable Senators and Members of the House of Representatives of the State of Ohio:

We, the undersigned druggists and pharmacists, do hereby respectfully ask that you amend the Dow Liquor Law, as follows:

"All apothecaries holding a certificate from the Ohio Board of Pharmacy shall be permitted to sell Wines and Liquors, for sickness, upon a written order of a parent or person of non-intemperate habits; that he, she, or they shall solemnly affirm by signature upon a legal form drawn by an legally authorized officer, that the purchase is not intended otherwise than set forth."

Recommended to the Ohio State Pharmaceutical Association.

J. D. WELLS, Cincinnati.
THOMAS JOHNSON, Steubenville.
C. M. MILLER, Mansfield.

On motion, report was referred to committee of three.

President Coblentz appointed Messrs. W. J. Martin, Cincinnati ;
G. L. Hechler, Cleveland ; R. W. Crane, Greensburg.

The Secretary read the following telegrams :

RICHMOND, IND., June 7, 1887.

To Virgil Coblentz, President Ohio Pharmaceutical Association :

Indiana sends hearty greetings and best wishes for prosperous meeting.

LEO. ELIEL, *President.*

HOLYOKE, MASS., June 8, 1887.

To President Ohio Pharmaceutical Association, Akron, O.:

Accept fraternal greeting from Massachusetts State Pharmaceutical Association.

J. W. COLCORD.

GRAFTON, WEST VIRGINIA, June 8, 1887.

To President Ohio Pharmaceutical Association :

West Virginia, in convention assembled, sends best wishes for pleasant and prosperous meeting.

J. A. GRANT, *President.*

On motion, the President was instructed to reply to these telegrams and to send telegram of greeting to the Kansas Association.

REPORT OF COMMITTEE ON NOMINATIONS.

To the Officers and Members of the Ohio State Pharmaceutical Association :

Your Committee to whom was referred the matter of placing in nomination the names of persons to act as officers of this Association for the ensuing year, beg leave to report as follows :

President—S. E. ALLEN, of Akron.

First Vice President—M. D. FULTON, of Bucyrus.

Second Vice President—GEO. W. VOSS, of Cincinnati.

Permanent Secretary—LEWIS C. HOPP, of Cleveland.

Permanent Treasurer—CHAS. HUSTON, of Columbus.

Executive Committee—THEODORE TROUPE, (Chairman) Springfield.

C. T. INMAN, Akron.

C. P. RENDIGS, Cincinnati.

THOMAS JOHNSON,

JOHN WEYER, *Secretary.*

Chairman.

On motion, the report was accepted.

The Secretary cast a ballot for the election of officers nominated as per motion.

The President appointed Mr. Phil Acker, Cleveland; H. J. Eady, Elyria; H. Boyer, Washington C. H., committee on time and place of next meeting.

The Executive Committee reported no objections to the fifty-nine applicants for membership, whose names were read at the morning session.

On motion, the Secretary cast an affirmative ballot for the applicants named, and the President declared them duly elected.

The Executive Committee reported two applicants for membership.

On motion, action was deferred until next session.

The resignation of F. W. Seymour was read and, on motion, accepted.

The Secretary read a communication from J. W. Colcord, Secretary Massachusetts Pharmaceutical Association.

LYNN, Mass., May 31, 1887.

In the days of Augustus a decree was issued from Rome that all the world should be taxed, and that each must go annually to the city of his enrollment for this purpose. To the Pharmacist, as he makes his journey yearly to the Collector's office and deposits his \$25, there seems to be little difference whether the decree issue from Rome or Washington, except that in the latter case it goes by favoritism and that he is one of the favored ones.

In ancient times a tithe was considered excessive and burdensome, but now in many localities the Pharmacist is taxed 10 per cent. of his income by the local and national government for the privilege of supplying his customers with liquors for medicine only, and if to this we add municipal *taxation*, it will double this percentage. Such being the case, is it to be wondered at that the Pharmacist, finding himself so treated and classed, yields to the temptation to sell all he can in order to reimburse himself for the money of which he considers himself to have been unjustly deprived? Brethren, do we desire to continue to be longer classified as liquor dealers? If not, how can we escape it? We have, through our local, State, and national Associations, passed condemnatory resolutions, and individually protested for years. *Cui bono?* Have we not thrown grass long enough, and is it not time to begin throwing stones, i. e.: Working to accomplish it? When our fathers had protested against the oppressive taxation of Great Britain till patience was exhausted, they at last took up arms. Shall not we? Whenever we unitedly *demand* the repeal of this law, and back the demand in a proper and business-like manner, it can be done. Individual action being out of the question, and action by State Associations working singly, equally so, while the efforts of the late National Retail Druggists' Association having proved unavailing, what shall be done? Who is there that believes that the American Pharmaceutical Association will do better by us even though re-organized? Not one. Such being the case, I humbly submit a

plan, that if rightfully carried on, cannot fail to accomplish the desired object. First, let each State Association, through one of its committees, either the trade or executive, canvass its State by means of local agents, so that every proprietor will be seen personally if he be willing to subscribe one dollar toward this object, it being agreed that no money shall be called for until such time as an organization (that shall be provided for in a latter portion of this plan,) shall be effected; provided also that no portion of subscription shall be used for any other purpose without the consent of subscribers, and no salaries paid. This work shall be done at the earliest practical moment and results noted. Whenever a sufficient number of States shall report favorably enough to warrant, each Association shall select one of its members to act as a committee for this purpose only. The committees of the several States shall promptly organize and proceed with the work. No money shall be expended without the consent of a proper committee, and no bills paid except as ordered by a finance committee. State Associations shall also select some influential member in each congressional district to call upon its member of Congress and urge the repeal. The statement has been repeatedly made that no funds were needed in this connection. Some of us, who have tried to get needed legislation in our State Legislatures, even where the welfare of the public was concerned, know the cost. How much greater will be the expense incurred where it is legislation for the relief of a special class and nationally. It is an axiom that governments seldom willingly relinquish an easily collectable revenue. As well might a commander say he could win battles without rations for his soldiers as for us to accomplish the repeal of this law without necessary funds. The time is passed when cities can be captured at the sound of the trumpet, or legislation secured simply by asking. It will be necessary for an able committee to make extended visits to Washington during the sessions, able counsel must be retained, petitions sent, circulars mailed, correspondence maintained, clerk hire paid, etc. Few retail Pharmacists are able to give of their time, let alone paying expenses, nor should they be asked to, where the benefits are to be shared equally by all. There is no question but that if this plan is entered into properly, it can be brought about within two years after organization.

J. W. COLCORD.

Will not Ohio join us in this greatly needed work? Please bring before your Association and urge that they take action on it.

On motion, communication was referred to committee who have report of Committee on Alcohol Tax.

The Secretary suggested as a topic for consideration by the Association of the use of 50 per cent. liquid preparations of vegetable drugs to take the place of Tinctures and Fluid Extracts now in use. Discussed by Hall, Rosewater, Spenser and Hopp.

Mr. Hopp—Mr. President, as one of the Pharmacopœia Committee for the State of Ohio, I have no report to make. I intended to write a paper, but my time was taken up with other matters. I would

like to bring up the subject of making a class of preparations to do away entirely with Fluid Extracts and Tinctures—making them of a fifty per cent. strength. A physician then desiring to prescribe fluid preparations of that kind, will prescribe according to the dose of the drug, and not prescribe a fluid extract dose for a tincture or a tincture dose for a fluid extract, which is occasionally done. I think a fifty per cent. solution will retain the active principles of any drug better than an hundred per cent., which is the strength claimed for the fluid extracts. Most of the tinctures being ten per cent., makes them very weak and expensive. I would like to bring out the ideas of some of the members, and probably we can form a committee of investigation and consideration to report at our next meeting.

Mr. Hall—Mr. President, this is a subject I have not thought of before, but it strikes me that it would be a very good thing if it could be brought into general use. We receive prescriptions from New York, San Francisco, Baltimore, New Orleans, Germany, and elsewhere continually, and unless it could become general, we would have to carry a stock of tinctures and fluid extracts just the same. Still, of course, that stock would be limited. I think a fifty per cent. solution would be very nice indeed if it could be brought about. I think it would be better than the fluid extract, in many cases, and certainly it would be less expensive.

Mr. Rosewater — Mr. President, in regard to making all preparations uniform, I heartily agree with some that we ought to have preparations uniform, but I think we have that just as well under the fluid extract as we would under the fifty per cent. solution. If it is fluid extract, we should all understand what it is if it is an hundred per cent. solution; and if it is a fifty per cent. one, we should not confound it with an hundred per cent. one. But we find a lack of uniformity, and I think more so than in anything else, in our tinctures. We notice, for instance, that the tinctures that are being prescribed in this country are not of strength they are in Germany or in England, or in any other country, and there is no reason why uniformity in tinctures should not be established. For instance, we have a great many of eight and ten per cent. strength, and they vary between that and as high up as fifteen per cent. Once they were as high as fifty per cent. I don't know whether there are any

fifty per cent. now or not; I do not think so. But I looked into that subject once with a view of suggesting, at the time of the meeting of the committee for establishing a universal pharmacopœia, that a plan should be adopted whereby tinctures should all be uniform, whether prescribed in this country or in any other country; and in order to do that, I saw, on looking over those that we have in this country, that but a very few changes would be necessary, and those easy to be made. For instance, tincture of capsicum and tincture of cantharides are a little weaker than ten per cent. All countries that have a strength of preparations that is above ten per cent. might unite in decreasing the strength of such preparations, until in five or ten years, the standard of ten per cent. is reached. Those that have a preparation weaker than ten per cent. could increase the strength of such preparations year by year until ten per cent. is reached. All preparations that now approach the standard—eight or nine per cent.—could be immediately brought to a ten per cent. strength. It would only be a short time until we could say that there was a universal standard of strength for all tinctures, and there would be no question as to what strength tincture of so-and-so has, any more than there is a question to-day as to what strength a fluid extract has. And this is as easy of application in this country as it would be in Germany, or England, or any other country, because with a gradation of five or ten years, preparations changed could be learned by physicians. Again, if such a plan is adopted, we would look at an old prescription and see that it was prescribed in 1860 or 1880, and immediately know the strength of the preparation at that time. It will give us a way of arriving at a direct connection between the strength of the past and the present. I think it would be a very simple method, and one that the Association could suggest and recommend to the American Pharmaceutical Association for adoption.

Mr. Hopp—Yes, but that is not in reference to fluid extracts. Now, can every druggist make a fluid extract? Can they be made as easily as a tincture? Representatives of the manufacturing establishments come to you and say, "You can't make fluid extracts. You can't extract them according to the Pharmacopœia. If you do, you must use heat; you must evaporate." The manufacturers say, "We don't use heat. We extract the active principle without heat." Now,

if the retailer cannot make these fluid extracts, he has to buy them, and the idea is for retailers to make them; and if they make a fifty per cent. solution, they can more easily extract the drug than make a fluid extract, because they cannot make a fluid extract pound for pound. Not only that, but according to a paper by Prof. Lloyd and one or two others, fluid extracts change by temperature—heat and cold.

Mr. Rosewater—Would it cost any more to make them?

Mr. Hopp—Not so much.

Mr. Rosewater—If you have a fifty per cent. strength you must use twice as much Alcohol.

Mr. Hopp—Not necessarily. The fluid extract itself has to be stronger in Alcoholic strength than fifty per cent. or ten per cent. mixtures, which are much easier to make.

Mr. Rosewater—You would only be adding to the number of preparations. It is bad enough as it is. I think we should arrive at more simplicity.

Dr. P. I. Spenser—I believe that something over thirty years ago Tilden & Co., of New Lebanon, New York, introduced fluid extracts. When fluid extracts were first made, they were just about fifty per cent. strength. Soon some manufacturers followed who wanted to make fluid extracts cheaper, and they did, and some of them came down to about twenty-five per cent., and we find finally all strengths. Now, I think the present standard as adopted, an hundred per cent. fluid extract, is really the best plan, and I think if we stick to it, it will be well. As to the retail pharmacist manufacturing his own fluid extract, he can make it just as cheaply as the manufacturer; he can make just as good a fluid extract, and even lose his excess of Alcohol. Even if he loses double the amount of Alcohol, if he will figure it up, it don't cost him any more than what he buys, and he knows what he has. As far as heat is concerned, I suppose all know it does not require sufficient heat to destroy the drug to drive off the Alcohol, and I think that to retain the present form is really better than to reduce its strength.

Mr. Feil read paper by J. G. Spenser, M.D., of Cleveland, in answer to Query 20.*

Paper by Jos. Feil in answer to Query 25.*

Executive Committee reported eleven applicants for membership.

Moved and seconded that the Association go in a body to the exhibition hall after meeting adjourns. Carried.

On motion, adjourned until 10:15 Thursday morning.

THIRD SESSION. *Thursday, June 9, 1887.*

On motion, minutes were approved as read.

The eleven applicants for membership, whose names were read at a previous session, were on motion elected, the Secretary casting the ballot.

The President appointed the following Committee on Pharmacy Board Vacancy: W. J. Martin, N. Rosewater and S. W. McKeown.

REPORT OF COMMITTEE ON TIME AND PLACE.

Mr. President and Gentlemen of the Convention:

In view of the fact that the next annual meeting of this Association will be its tenth anniversary, and that the first meeting was held in Columbus, your Committee on time and place of next meeting would suggest the place of meeting be at the above named city, and time second Tuesday in June, 1888.

Respectfully submitted,

HARRY BOYER,
HENRY J. EADY,
PHILIP ACKER.

On motion, report was accepted.

On motion, Columbus was chosen as the next meeting place. Time, second Tuesday in June, 1888.

Mr. Weyer read report of Committee on President's Address.

REPORT OF COMMITTEE ON PRESIDENT'S ADDRESS.

To the Officers and Members of the Ohio State Pharmaceutical Association:

Your committee, to whom was referred the Address of the President, beg leave to report the following:

*Discussions follow papers.

That in accordance with his recommendation the Treasurer be authorized to collect any unpaid dues through any banking institution.

Your committee would hereby respectfully recommend that instead of entailing upon the Standing Committee on Papers and Queries, additional duties of that of Adulterations and Sophistications, as recommended by the President, that the By-Laws be so amended as to provide an additional committee for that especial purpose.

As to his recommendation that a portion of the funds of the Association in the hands of the Treasurer, be set aside as a permanent fund, your committee would respectfully recommend that the funds held by the Treasurer are not sufficient to justify any action in this matter at present.

Our President, having recommended the establishment of a life membership, your committee would refer the matter for discussion without recommendation.

In regard to a yearly conference of State Secretaries in connection with the American Pharmaceutical Association, for the purpose of discussing ways and means of conducting State Meetings, your committee declines to make any recommendation.

With regard to recommendation for amendment of Art. 7, Chapter II, of our By-Laws, we recommend that it remain as it is.

As to making an exhibit of different pharmaceutical preparations, made by any members of our Association, either pharmacists or assistants, meets with our hearty approval.

Respectfully submitted,

JOHN WEYER,
JAS. H. CASE,
M. D. FULTON.

On motion, report was accepted.

On motion, the following suggestions of the President were adopted:

That the Treasurer be authorized to arrangement with some bank in Columbus for the collection of annual dues.

That the Secretary attend the annual conferences of State Association Secretaries at the meetings of the American Pharmaceutical Association, and that his traveling expenses for this year be paid by the Association.

That a committee of five be appointed to solicit exhibits of pharmaceutical preparations made by members of the Association.

The President appointed the following committee: H. C. Cook, Columbus; C. T. P. Fennel, Cincinnati; L. Sollmann, Canton; J. D. Lisle, M.D., Springfield; C. D. Kerr, Gallipolis.

The Secretary read invitation from Michigan Pharmaceutical Association to attend its meeting at Petoskey, July 12, 13 and 14, 1887, and credentials of Dr. A. B. Lyons, of Detroit, and J. C.

Harper, of Milan, Michigan, delegates to the Ohio State Pharmaceutical Association.

Dr. Lyons being present, privilege of the floor was extended him.

Dr. Lyons addressed the meeting with a few remarks, and extended a hearty invitation to the members to attend the meeting of the Michigan Association.

Mr. J. C. Harper, of Milan, Michigan arrived as the Association adjourned, and on account of sickness, was obliged to return before the next session.

On motion of Mr. Hechler, the President appointed the following delegates to attend Michigan Association meeting: L. C. Hopp, Cleveland; S. E. Allen, Akron; F. H. Coblenz, Springfield.

Mr. Feil read paper by Prof. J. U. Lloyd, entitled, "The Hand-Writing on the Wall."

Prof. Lloyd—Mr. President, can I interrupt the order of business to introduce a resolution? About forty years ago a gentleman came from Germany to the State of Ohio, and commenced a pharmaceutical business in the city of Cincinnati. He was well known at that time in our city, but many years ago moved to a Southern city, the city of Mobile. Since that time he has acquired a national and international reputation. He is known in Europe, perhaps, better than he is to many in America. He is a man that we look up to and honor. I suppose that all pharmacists do. All, certainly, who have made his acquaintance. He is the man whom Prof. Maisch selected to review for the *Journal of Pharmacy* the "National Dispensatory," when it appeared. He was selected by the Confederate Government, although his opinions were with the Northern people, to make their medicines for them during the War, and he did so. He is the man—unassuming and talented—who was selected by our Government to write up the trees and forests of the South for the last Census, and he did the work thoroughly. He then went to Washington to continue that branch of work in the Agricultural Department, and he did that work. I have learned since I started for this meeting that this gentleman—and, by the way, his name is Dr. Charles Mohr, of Mobile, Alabama—is to sail for Europe to visit the Fatherland, within a few days, and I believe, gentlemen, that it would be a graceful act in us and a compliment to our Association to elect him.

to an honorary membership in our Association, and telegraph that fact to New York. I know it will be appreciated by him, and I know it will be appreciated abroad. I hereby introduce a resolution to that effect, trusting that it will be seconded.

On motion of Prof. Lloyd, Dr. Charles Mohr was elected an honorary member. (See acceptance from Dr. Mohr).

NEW YORK, June 18, 1887.

Mr. Lewis Hopp, Secretary Ohio State Pharmaceutical Association :

My Dear Sir—Delayed by heavy storms during my trip by sea, I arrived here but a very short time before taking the steamer for Europe. Hence the delay in my acknowledgement of the receipt of your telegram I found on my arrival here at Dr. Hoffman's. Permit me to express by this the feeling of pleasure I experienced in finding myself at the last session of your body appointed an honorary member. Having shortly after my arrival in this country, found in your State the starting point of my career in life, which led to my connection with our profession, and to those pursuits which have ever been the delight of my life, I feel naturally attached to Ohio, and for that I appreciate so much higher the honor which the Pharmaceutical Association of that State has conferred upon me. Believe me, with my sincere regards, fraternally yours,

CHARLES MOHR.

Mr. Cook read paper by Prof. C. T. P. Fennel, in answer to Query 28.

Mr. McKeown read paper in answer to Query 33.

REPORT OF AUDITING COMMITTEE.

To the Officers and Members of the Ohio State Pharmaceutical Association :

Your committee appointed to examine the Treasurer's report, find the same correct.

Respectfully submitted,

G. L. HECHLER,
JOS. I. BECK,
M. D. FULTON.

The Committee on Nominations reported the name of H. C. Cook, of Columbus, Local Secretary.

On motion, the report was accepted, and the Secretary cast an affirmative ballot for his election.

The following two amendments to the By-Laws were offered:

Resolved, That Chapter V, Art. 1, of the By-Laws, be so amended as to provide an additional committee of three members, to be styled a Committee on Adulterations and Sophistications.

[Signed]

JOHN WEYER,
M. D. FULTON,
J. H. CASE.

Resolved, That Chapter II, Art. 8, be added to our By-Laws, which shall read as follows: Active members of this Association in good standing for at least five years, may have issued to them by the Secretary a Certificate of Life Membership, upon the payment of ten dollars into the treasury of the Association.

JOHN WEYER,
J. H. CASE,
M. D. FULTON.

President—These will have to lay over until our next session.

REPORT OF COMMITTEE ON PHARMACY BOARD VACANCY.

Your committee beg leave to report the following names :

J. A. NIPGEN, of Chillicothe.

G. L. HECHLER, of Cleveland.

M. D. FULTON, of Bucyrus.

PHIL LEHR, of Cleveland.

C. N. NYE, of Canton.

W. J. MARTIN,
N. ROSEWATER, } Committee.
S. W. McKEOWN, }

On motion, the report was adopted.

Extracts were read from paper prepared by E. H. W. Stahlhuth in answer to Query No. 32, and by John J. Buehler, Query No. 12.

On motion, adjourned till 2 P.M.

FOURTH SESSION. Thursday, June 9. Afternoon session.

Minutes read and approved.

Amendment to Chapter V, Art. 1, By-Laws, adopted.

Article 8 to Chapter II, of By-Laws, adopted.

The following communication was received.

CINCINNATI, Ohio, Nov. 30, 1886.

The Public Library, of the city of Cincinnati, has received from Mr. Lewis C. Hopp, as a gift to the library, the book mentioned in the following schedule, for which the board of managers return their sincere thanks.

GEORGE EWING, *President*,
W. W. WHELPLEY, *Librarian*.

Proceedings of the Ohio State Pharmaceutical Association, at its eighth annual meeting held in Springfield, June, 1886.

Mr. Voss moved that the salaries of the Treasurer and Secretary be paid, and that they be authorized to draw on the treasury for the amount. Seconded and carried.

The Secretary read the report of the committee appointed to consider the report of the Committee on Tax on Alcohol.

REPORT OF COMMITTEE ON TAX ON ALCOHOL.

To the President and Members of the Ohio State Pharmaceutical Association :

After due deliberation your committee desire to recommend the adoption of the changes in the Dow Law as recommended by Mr. Wells, and that it would be well for our State Association to co-operate with other State Associations in following out the plan as suggested by Mr. J. W. Colcord, to secure legislation to have the national tax on Alcohol removed.

W. J. MARTIN,

G. L. HECHLER.

On motion, the President appointed a committee of five to take the matter in charge.

Committee: Wells, Hechler, Hall, McClain and Arnold.

Mr. Feil read the following papers (by title.)

W. Simonson, of Cincinnati, in answer to Query 34.

S. W. McKeown, of Youngstown, Query 14.

E. Goodman, of Cincinnati, Query 14.

Also paper on Ethel Nitrite, by J. Geo. Spenser.

A. Thurston, of Grand Rapids, O., in answer to Query 15.

Mr. Feil—I move that a vote of thanks be given to all the members who have furnished papers here, and a special vote of thanks to Mr. J. George Spenser, who has furnished us two very interesting papers, and who is not a member, and that ten copies of the Proceedings be given to him. Seconded and carried.

A discussion of the "Dow Law" being suggested, Mr. Weyer was requested to speak on the subject, and said:

Mr. Weyer—Mr. President, I hardly know what to say on that matter. I don't know that there is anything in it that particularly interests pharmacists, except the clause limiting the sale of liquors by

the pharmacist, and that is embodied in a very few words. He may sell upon the prescriptions of physicians in good standing—reputable physicians—made in good faith; that is, when the prescription is written for a case of necessity, the same as he would write any other prescription. It must be in good faith, and by a reputable physician. Then, in addition to that, he is permitted to sell liquors for mechanical, pharmaceutical and sacramental purposes. "For mechanical purposes," I take it, means, perhaps, to the painter who desires to dissolve shellac, or for such purposes as that. "For pharmaceutical purposes," I take it, was intended for the wholesale dealer, that he may sell to the retailer. The retail druggist scarcely ever sells to any person else for pharmaceutical purposes. He is not permitted to sell for medicinal purposes at all except on the prescription of a physician. There is no need of our attempting to construe "pharmaceutical purposes" to mean that we can sell to our customers as we please. If we sell "for sacramental purposes," of course it is expected that we thoroughly understand or are satisfied that it is to be used for that purpose in wines. We long ago discussed this matter in our Society in Cincinnati, and decided clearly in our own minds that if we wanted to sell liquors except on physicians' prescriptions, we must pay the tax.

Mr. Hechler—Mr. Chairman, I do not entirely agree with friend Weyer, of Cincinnati, in regard to the meaning of "pharmaceutical." The law does not in any way state that that applies to wholesale houses. "Pharmaceutical" relates to the preparing, preserving and compounding of medicines. Now, I do not believe, in the first place, that the Dow Law was intended to affect legitimate druggists and pharmacists in the sale of liquor to parties that wish to use it for medicinal purposes, although it specifies medicinal only on prescriptions of regular practicing physicians. Suppose some one comes into the store and wishes to buy fifteen cents' worth of rye whiskey and five cents' worth of camphor. Do you suppose for a minute that the pharmacist, under the Dow Law, has no right to sell them? I should sell them, and I think we have a perfect right to do so. Do you suppose that this Dow Law can compel people to go into saloons? Do you suppose it was intended by the Dow Law to provide that people who do not wish to go into saloons, who wish to buy their

liquor in a proper place, where they can be confident that they are getting pure liquor, cannot go in a drug store to buy their liquor without the druggist being obliged to pay two hundred dollars annually for a license, when, in many instances, he does not sell that much liquor through the year? I think the law intended that pharmacists should have the privilege of selling it for legitimate purposes.

Mr. Case—Mr. President, I would like to ask a question. If a person has consumption, and is in such a condition that he cannot take a bath without liability of taking cold unless he added Alcohol to the water, and should send to the store for Alcohol for that purpose, would the druggist be allowed to sell it to him without a prescription?

The President—Following the law strictly, I do not think he would.

Mr. Case— I refused a case of that kind last night without a prescription. At the same time, I do not think it a proper thing to do—a poor person suffering and wanting to take a bath.

The President—It seems that the law does not allow you to make any distinction.

A Member—Was this an internal or external bath?

Mr. Case—External. This is not an exaggerated case at all. I wish to ask another question. Has a druggist a right to sell cologne or bay rum without being liable to the Dow tax?

The President—Cologne would be a pharmacopœial preparation.

Mr. Case — That may be. I asked the question of our local Judge here some time ago, when there was a party around attempting to catch the druggists of Akron—and he did catch some, I believe. I went to the Judge and asked him if he could explain to me at what time whiskey became whiskey and at what time it ceased to be whiskey and became medicine. He said he could not; I would have to use my own judgment. He could not give me any answer whatever to it. Parties come to your store sometimes and want quinine and whiskey; they want it bad—not because they are in the habit of using it, but because they do not wish to go and ask a physician for a prescription and pay half a dollar for it. Has a druggist a right to prepare for a man a bottle of whiskey and quinine if he thinks he is not using it as a beverage but medicinally?

Mr. Weyer—Mr. President, I have not the slightest idea but that when the law was framed it was intended to give the druggist certain privileges; but the wording of it is unfortunate in that respect, and it does not cover his case at all. As to quinine being added to whiskey, it is my opinion that when whiskey is used and sufficient additional ingredients are added to make it distinctly a medicinal article, it would not properly come under the Dow Law. It must be distinctly a medicinal article. For instance, a man came into my store about a month ago and asked me for a quantity of whiskey. I told him I could not sell it except on a physician's prescription. "Well," he said, "I want it to make a cough mixture." I said, "What do you want to make?" He said, "I want to take equal parts of whiskey, glycerine and honey." "Well," I said, "I will make you a cough mixture." I made him up a pint of equal parts of whiskey, glycerine and honey, and labelled it on the bottle, and sold it to him.

Mr. L. W. Smith—I have had this come under my notice: Sometimes a prescription is made for a pint of whiskey, and the party will say, "I only want a couple of ounces on the prescription, and I will call for it again." Would I be violating that law to fill that at another time, the prescription being left in my care?

Mr. Lewis—If a consumptive, for instance, with such a prescription was poor and had to use whiskey right along, and I knew that he would need it right along, would I be justified in refilling said prescription for him?

Mr. Weyer—I think the physician could write on his prescription, "To be refilled." I think that would be the proper way to do in all those cases.

The President—Or the patient might retain the prescription and present it each time he wanted it filled.

Mr. Hechler—Suppose a person should ask you for Alcohol, saying he wished it for mechanical purposes? Suppose he wanted it for some secret process?

Mr. Weyer—I would have him sign a certificate.

Mr. Hechler—So would I, and with a witness. For instance, if he wanted to put it in a barrel of cider, I think that by having him sign with a competent witness you could sell it.

Mr. Case—A painter who lived in our ward came to our store at one time with a pint bottle, with shellac in the bottle. He wanted a pint of Alcohol to put in that shellac for the purpose of making shellac varnish to varnish knots in his painting. I filled the bottle with a pint of Alcohol. He had his sleeves rolled up and was sweating, and he took that outside of the store and commenced to use it up as whiskey, although shellac gum was in it. Now, I want to know if I violated the law. (Laughter.)

Mr. Miller—Mr. President, I have gone to some expense to get an answer to some of these questions. It has cost me a hundred dollars. (Laughter.) I was on that Committee, and I asked the Prosecuting Attorney of our county some questions in writing, and he answered them. I think Mr. Wells has those questions; they have not been returned to me. We have adopted a form of certificate down in our county which answers our purpose, and I will pin a copy of it upon the wall.

I hereby certify that this day I bought of
C. M. MILLER, Druggist,

.....
Exclusively for Mechanical, Pharmaceutical or
Sacramental purposes.

.....
Mansfield, Ohio,....., 188..

MANSFIELD, O., April 19, 1887.

H. E. Bell, Attorney:

Dear Sir—I submit herewith a printed slip, as a part of this inquiry, and request your opinion in writing as to the following propositions:

1. As to Section 8 of an act entitled, "An act providing against the evils resulting from the sale of intoxicating liquors."

What is a fair and full construction of said section as pertaining to the business of drugs and prescriptions?

2. If a party purchasing liquors other than on prescription of a regular physician represents the use to be either mechanical, pharmaceutical or sacramental purposes and signs this slip, erasing the two purposes not represented, which slip is retained by the druggist, what in your opinion is the liability of the dealer and purchaser, or either of them, in the light of said Section 8?

Yours truly,

CHAS. M. MILLER.

To C. M. Miller, Druggist, Mansfield, O.:

Sir—You submit herewith an inquiry in writing, with printed slip, asking my opinion as to two stated propositions *relative to the Dow Liquor Tax Law and Section 8 of the same.*

I understand, upon a careful examination of said *Section 8*, that the term *trafficking in intoxicating Liquors*, would be construed to mean and include any and all sales by retail, of Liquors, except upon *prescription issued in good faith by reputable physician in active practice.* However, the same section authorizes sales for "*exclusively known mechanical, pharmaceutical and sacramental purposes*"

I understand the word *known* to imply actual knowledge of such purpose at the time of sale. I think it but reasonable to conclude that, such knowledge which the law seems to require of dealers, can only be acquired by inquiry directed to the purchaser. For instance, a purchaser names one of the three purposes, to-wit: *mechanical, pharmaceutical or sacramental*, apparently in good faith, when perhaps it may be in fraud and intentional evasion of the law; an inquiry in good faith by the dealer of the purchaser, is in many cases the only means and source of information within the power of the dealer as to the purpose contemplated. I surmise the purpose of the printed slip or receipt, is, in all cases where goods are sold for either of said purposes, and not on *prescription.* That the purchaser signs the same as an evidence of good faith and purpose; and you inquire the protection, if any, the dealer would have from prosecution for violation of the law if the actual purpose was other than stated in the slip or receipt.

Assuming the foregoing to be a correct surmise of your inquiry, I will say that if a purchaser makes such request, in the form of the printed certificate, erasing two, and leaving one of the *purposes* as that for which the goods are to be used, and signing the same delivers it, and the dealer retains the same and makes the sale in *good faith*, it is my opinion that in such case, and in every absence of fraud and purpose of evasion which the term *good faith* would imply, on the part of the dealer, that the dealer would be absolved from liability for a violation of said *Section 8*, and would not come within a violation of the provisions of the same, as, in my opinion, he acts upon such knowledge of the purpose for which the goods are obtained, as is within his power, and in the full exercise of *good faith.* And as to the liability of the purchaser in such case, I am clearly of the opinion that the purchaser would, under such circumstances, by reason of such fraudulent purchase and representation to the dealer, and such flagrant violation and evasion of said *Section 8*, come within the violation of the provisions of said *Section 8*, and be liable to prosecution under the laws of Ohio, in such case made and provided.

I am very truly yours,

H. E. BELL, Attorney, Mansfield, Ohio.

REPORT OF COMMITTEE ON PRIZES.

Mr. President :

Your committee beg leave to report the awarding of prizes, after a careful examination of the papers presented, as follows:

Query No. 14 is entitled to first prize; No. 28 is entitled to second prize; No. 32 is entitled to third prize.

N. ROSEWATER,
JOHN WEYER,
J. I. BECK.

Report of Committee on Prizes accepted.

Messrs. Wahmhoff and Weyer were appointed a committee to escort the newly-elected President to the chair.

Mr. Allen—Gentlemen, I thank you very kindly for the honor which you have conferred upon me, and I think that I am doubly under obligations to your committee and to you all, for the reason it is an honor which I have not sought myself. I had never asked for it, and when some of my friends came to me and asked me to take it, I said "No, I prefer that somebody else should have it." And now that I have been nominated and elected to the office, I feel that I am doubly under obligations. Again, gentlemen, I thank you for the honor. (Applause.)

Prof. Coblentz—Gentlemen of the Association, I desire in turn to thank you for your kind attention, the promptness with which you have assisted in the conducting of business, and for the many courtesies and kindnesses received from both members and officers of the Association. I shall always remember the Ohio State Association wherever I may be, and I hope that you will have the success in the future that you have had in the past. (Applause.)

Mr. Hechler—Mr. Chairman, I wish to make a motion to extend our hearty thanks to our retiring President for the courteous treatment extended by him to all members of this Association. Motion seconded and carried.

Eleven members elected.

Moved and seconded that a vote of thanks be tendered to the Local Secretary for his efficient work during the past year. Carried.

Mr. Voss moved a vote of thanks to the druggists of Akron, to the press, and to the city government for the use of the Council Chamber. Seconded and carried.

The Secretary presented a bill for legal services paid by Mr. Miller, and moved that the same be allowed, and that the Treasurer be authorized to pay the amount to Mr. Miller. Seconded and carried.

Mr. Miller moved that the correspondence between the Committee on Legislation and the Prosecuting Attorney of Richland county, be printed and a copy mailed to every member of the Association.

Mr. Fulton moved as an amendment that the correspondence referred to be printed in the Proceedings.

Amendment accepted, seconded and carried.

President Allen announced the following Standing Committees.

Trade Interests.—C. B. Johnson, Middletown; M. H. McClain, Galion; W. J. Walding, Toledo.

Papers and Queries.—Joseph Feil, Cleveland; W. Simonson, Cincinnati; J. I. Beck, Springfield.

Reporter on Progress of Pharmacy.—S. W. McKeown, Youngstown.

Pharmacy Laws.—G. L. Hechler, Cleveland; J. A. Nipgen, Chillicothe; Chas. Huston, Columbus; J. H. Wahmhoff, Delphos; W. J. Martin, Cincinnati.

Unofficial Formulae.—Lewis C. Hopp, Cleveland; E. Goodman, Cincinnati; H. C. Cook, Columbus; F. T. Bower, Toledo; J. C. Bolger, Salem.

Adulterations and Sophistications.—Joseph Feil, Cleveland; J. U. Lloyd, Cincinnati; F. T. Bower, Toledo.

The Secretary read resignation of Prof. Coblenz as a member of the Committee on Revision of the Pharmacopœia.

Mr. Cook moved that the Association accept the resignation with regret. Seconded and carried.

The President appointed Mr. Huston to fill the vacancy caused by the resignation of Prof. Coblenz.

REPORT OF COMMITTEE ON EXHIBITS.

The following is a complete list of exhibitors :

Benton, Myers & Co., Cleveland, O.—Sponges and Chamois Skins. Represented by W. G. Hornsby.

Duroy Wine Co., Cleveland, O.—Pure Native Wines. Represented by E. J. Haines.

Parke, Davis & Co., Detroit, Mich.—Chemicals, Fluid Extracts, and Crude Drugs. Represented by W. K. Walker and J. H. Bellerman.

F. H. Stearns & Co., Detroit, Mich.—Non-secret Remedies and Pharmaceutical Preparations. Represented by A. Hitchman.

John Wyeth & Bro., Philadelphia, Pa.—Fluid Extracts, Compressed Tablets, Elixirs, etc. Represented by J. C. Ballard.

Burrough Bros. Mfg. Co., Baltimore, Md.—Exclusive Manufacturers of Fluid Extracts. Represented by W. L. Hooff.

Eli Lilly & Co., Indianapolis, Ind.—Complete Line of Pharmaceutical Preparations. Represented by A. J. Wallis.

The Upjohn Pill & Granule Co., Kalamazoo, Mich.—Soft Coated Pills and Granules. Represented by H. S. Mead.

Wm. S. Merrell Chemical Co., Cincinnati, O.—Chemicals, Fluid Extracts, etc. Represented by H. Skellman.

Seabury & Johnson, New York and London.—Surgical Plasters, Antiseptic Absorbents and Dressings. Represented by C. N. Raymond, M.D.

Foote & Jenks, Jackson Mich.—Perfumes. Represented by C. S. Peyton and C. C. Jenks.

McKesson & Robbins, New York, N. Y.—Pills. Represented by James Bennett.

Graham Bros. & Co., Chicago, Ill.—Perfumers and Manufacturers of Fine Toilet Soaps. Represented by W. S. Howarth.

Eastman & Bro., Philadelphia, Pa.—Perfumery, Toilet Soaps, etc. Represented by W. R. Jewett.

J. M. Portuando & Co., Philadelphia, Pa.—Cuban Hand Made Cigars. Represented by J. S. Crombarger.

W. S. Torsion Balance and Scale Co., Cincinnati, O.—Manufacturers of Druggists' Scales. Represented by A. L. Gallaher.

A. C. Brown, Canton, O.—Druggists' Glassware. Represented by A. C. Brown.

King Varnish Co., Akron, O.—Fine Coach and Furniture Varnish. Represented by A. M. Armstrong.

E. W. Hoyt & Co., Lowell, Mass.—Rubifoam and German Cologne. Represented by L. E. Smith.

National Cash Register Co., Canton, O.—Manufacturers of Cash Registers. Represented by J. H. Crane.

H. W. Stetcher, Cleveland, O.—Sticky Fly Paper. Represented by H. W. Stetcher.

Bradley & Smith, New Haven, Conn.—Cigar Cases. Represented by J. S. Crombarger.

Hamel & Weidersheim, Philadelphia, Pa.—Flavoring Extracts. Represented by J. S. Crombarger.

St. John Sewing Machine Co., Springfield, O.—Ice Shaver. Represented by W. B. Dix.

Malto Mfg. Co., Cleveland, O.—Manufacturers of Malto. Represented by Chas. Miller.

Respectfully submitted.

JOHN GRETHER.

On motion, the Association adjourned to meet in Columbus, O., the second Tuesday, June 12, 1888.

LEWIS C. HOPP, *Permanent Secretary.*

LIST OF QUERIES

TO BE ANSWERED AT THE TENTH ANNUAL MEETING,

To be held in Columbus, O., June 12, 1888.

1. Are the assayed Fluid Extracts of manufacturers true to the strengths claimed?
2. Is Cochin Ginger more valuable for pharmaceutical uses than Jamaica Ginger?
3. Examine the Hypophosphites of the market for impurities and percentage of Hypophosphite in each salt.
4. What tests distinguish certainly between the volatile oil of *Betula Lenta* and Oil of Wintergreen, for which the former is said to be substituted frequently?
5. Is it justifiable to dispense *Aqua Amygdale Amaræ* when *Aqua Lauro-cerasi* is ordered by the physician?
6. Examine the Pancreatins of the market and report as to purity, etc.
7. Does Hydrocyanic Acid of the present U. S. P. process keep better than a two per cent. aqueous solution under the same conditions?
8. Hydrastin has been proven to be the chief proximate principle of *Hydrastis canadensis*; devise an assay process by which its percentage in the drug may be accurately determined.
9. Is Laudanum now made by the U. S. P. '80 formula; that is, will it assay between 1.2 and 1.6 per cent. Morphine?

10. What is the condition of the present market on powdered Rhubarb?
11. Examine and report upon the Concentrated Liquors for preparing certain Official Syrups; should they be used for the purpose recommended?
12. What Ferrous Salt may with advantage replace Ferrous Lactate in preparing Syrupus Hypophosphitum cum Ferro?
13. It has been stated that Caustic Potash and Soda cannot easily be made of 90 per cent. purity strength required by the U. S. P.; is this true, and what is the percentage of pure Alkali in commercial specimens of both?
14. Is Dialyzed Iron antidotal to arsenious or arsenic compounds? If so, what is its value as compared with Ferric Hydrate and with Ferric Hydrate with Magnesia?
15. Is the Chromate or Oxalate Quinine test more valuable than Kerner's?
16. Examine the Calamines of commerce.
17. Is the Hubuck's English Zinc Oxide sold at a high price more valuable for making the Zinc Oxide Ointment than that usually sold by wholesale druggists?
18. Commercial Glycerine is now obtained from two sources: vegetable oils and animal fats; is that from the former source superior to that from the latter?
19. What is the best process for making Syrup of Calcium Lactophosphate?
20. Analyze and give proximate formulæ for Bromo-Chloralum, Platt's Chlorides, and other popular disinfectants.
21. What is the amount of Ash present in the U. S. P. and in the Alum Precipitated Podophyllins of the market; is there enough Alum or Aluminum Salts present in the last named to be injurious?
22. Examine the various brands of Condensed Milk.
23. Examine the Potassium Chlorate of the market for Chloride and other impurities.
24. Old specimens of Fowler's Solution are often nearly free from Arsenous Acid; what changes take place in this preparation by time, and under what conditions is it best stored?
25. Do brands of Commercial Citrate of Caffeine differ in the percentage of Caffeine?
26. What is the composition of "Solution of Bromide of Arsenic" sold under various names and used extensively in some sections? does it contain true Arsenious Bromide (As. Br₃)?

27. Can water clarified by Alum be employed for Pharmaceutical uses?
28. What is the best method of eliminating the Oil from the Seeds of *Strychnos Nux Vomica*, so that the Alcoholic Extract may be powdered?
29. What are the most suitable excipients for Calomel, Corrosive Sublimate and other Mercury Salts? Which produces the least change in the contained chemical after the mass has been long made?
30. Distilled water: how long can it be kept pure? would it not be better to use filtered river water than Distilled Water that has been on hand for some time?
31. Carbonate of Magnesium is much used in clarifying mixtures obtained in making Syrups and Wines from Tinctures and Fluid Extracts; can it be used safely if the mixture represent an Alkaloidal Drug, as Coca, *Pilocarpus* or *Ipecac*?
32. Dilute Phosphoric Acid is said to be made from the Glacial Acid by some manufacturers; can this be proven, and is it advisable to be thus prepared?
33. Chlorine Water: at what rate does decomposition proceed? Data are wanted as to its keeping qualities under varying conditions.
34. Can Wood Alcohol be used in place of Ethyl Alcohol in making solid extracts and other preparations from which the solvent is expelled? What are its solvent powers as compared with the latter, in extracting Alkaloidal Drugs, as *Nux Vomica*, *Ipecac*, *Belladonna*, and others?
35. It is claimed that many Wines of Coca are made from Wine and a Cocaine Salt flavored with a small quantity of Fluid Extract Coca Leaves; can this be proven, and is it desirable to have this preparation made in this manner?
36. Devise a practicable formula for a liquid preparation of *Granatum* to replace the decoction, which shall be free from Tannin or other objectionable proximate principle of the drug.
37. Non-secrets: Is it justifiable or advisable to sell those which are colorable imitations of proprietary medicines?
38. Specific gravities of Aqueous Solutions of Ammonia of certain strengths are given differently by authorities usually quoted; what are the true specific gravities of 10 per cent. and 28 per cent. Aqueous Ammonia at 4°C, at 15°C and at 25°C, the standard for comparison being water at 4°C and the same at 15°C?
39. At what rate does Iodine disappear in Tincture of Iodine when kept under conditions most favorable to its preservation?
40. Is Ethyl Sulphuric Acid found in the officinal Aromatic Sulphuric Acid, either at the time of making or when long stored?

41. What is the quality of Chloroform and Purified Chloroform of the present market supply?
42. What are the comparative values of Russian and Chinese Cantharides, based upon percentage of Cantharidin? Should the latter be used in making officinal preparations of Cantharides?
43. It has been stated that Conium fruits occur invariably in Italian Anise; an examination of commercial Anise for this contamination is desirable.
44. How does solution of Bimeconate of Morphine compare in strength with Tincture of Opium of the present standard?
45. Is Lead Plaster made from Cotton Seed or Lard Oil as good as that made from Olive Oil?
46. Test commercial Phosphoric Acid, U. S. P. for impurities and for percentage of absolute Phosphoric Acid $H_3 PO_4$
47. What is the composition of commercial Calcium Lactophosphate, and is it suited for making the Syrup?
48. What syrups may, and what may not, be made advantageously by percolation?
49. What are the relative merits of proposed methods for making Diachylon Ointment? Which give a product of best keeping qualities?
50. What syrups of the U. S. P. not now made from Fluid Extracts, can best be made in this manner?

THE HANDWRITING ON THE WALL.

BY J. U. LLOYD,

Cincinnati, O.

Gentlemen—The object of this paper is, I believe, of importance. We of the present are interested—those who are to follow, members of our profession—must be more interested. To me the handwriting is distinct and the letters are plain. There is no longer a doubt regarding their character, and I think that most persons will agree with the spirit of my paper even if differing on certain features of it. It matters not whether the handwriting is as we wish it, or is in substance as we would prefer it, there it stands and boldly stares at us. Before proceeding I would call to your attention that my own

pharmacy is the result of empiricism, and that when I refer to empiricists in pharmacy, I include myself and others who have stumbled into the profession by irregular labors and interrupted, unsystematic, laborious study. I will not here attempt to argue the final possible result of such labor, but simply state that we have had to do a large amount of work that under proper guidance is perhaps unnecessary.*

In this regard most of us stand together. We are, as a rule, pharmacists with high opinions of the olden time and former methods. We commenced our labors as apprentices or errand boys; we struggled at first with window washing, mortar and graduate cleaning, and perhaps scrubbing the floor. Then we were permitted to learn the weights and measures; to occasionally triturate a mixture in a mortar; to replace bottles after our employers had used them in compounding a prescription, and afterward to even *bring* him shelf bottles to obtain his medicines from, as we watched him fill a prescription. Thus we passed gradually to the weighing of these substances under the eye of our preceptor, the folding and dividing of powders, the measuring of liquids after our employer was sure we could read that particular prescription, and so on to filling prescriptions; few of us had the advantage of a College of Pharmacy education.

Am I not right—have we not severally felt the pride of being for the first time left alone in the store? To me it seems that the proudest day of my life was that on which my employer, (bless him, still one of the worthy members of this Society,) gave me charge of his store while he left for an entire afternoon. This is the way we learned the business, and in my opinion it is yet the only way to learn a certain part of it. However, those of us who thus reached a creditable position in our profession are confronted with the fact, for fact it is, the past is not the present.

Once we made our own pills, plasters, tinctures, syrups; there were but few fluid extracts and no elixirs. Elegant pharmacy was unknown. Now the plaster iron is nearly as great a curiosity as a hand spinning wheel or the old tin lantern. We purchase our pills ready made and

*At the present day, those of the younger generation, even if not convenient to one of the teaching institutions, can avail themselves of the excellent series of lectures issued by C. S. Halberg, of the National Institute of Pharmacy, Chicago. This is a superior series of papers and I study each lesson as it appears, with interest and advantage, and commend the set to my professional friends.

in bottles; our fluid extracts are supplied to many of us without more trouble than the extracting of a cork; tinctures and syrups are more or less obsolete, being replaced by pharmaceuticals that are perhaps not made by pharmacists. Are these not facts? Do I overestimate when I say twenty years only has thus altered our business and our business methods? We have striven to repel the invasion, we have resented each innovation, we have attempted to devise methods whereby pharmacists could continue in the beaten path, but I am now of the opinion that we have been combatting the inevitable. Do we lament this change? It matters not if we do. Shall we sour upon the word and make it unpleasant for others because of changes that happen in a world where is all change? What benefit follows? The tide is moving into new channels—we must either move with it or drown. A fish will drown in water if the current is swift and the fish is forced to stand still and face it. Growling will not help us. Whether we like the weather or not, we must meet it, and unless we do meet the changes in methods we will suffer. Have we not examples of honorable and persistent men holding on to olden times, and do we not in every old city note the result? We may crawl into an old-style store; we may keep a jar of snakes and lizards in our front window; we may thrust at each physician that pharmacy is degenerating, and we may growl at the condition of affairs as compared with the olden time. Our former patrons will one by one move away; the aged physician will die; the modern physician will propose to administer what he pleases, as he pleases; the modern patron will insist upon getting medicines where there is sunlight and pleasant words; where perfumery, stationery, and cigars are sold, if you please, and even candy. Thus we will become a relic of a former period, and our families will suffer, perhaps, because we refuse to learn that the world will not walk backward in the path our preceptor did. These lessons are every-day ones and painful, too. Struggle as we may, such facts are incontrovertible. Finally, we will become sour and crabbed and either snarl at a few who care nothing for us and irritate, by smiling at us, or will give up the business in disgust. Then our lizards and musty herbs, our snakes and old style ointment jars will be carted to the dump and a man of the present, (perhaps not a pharmacist, but employing one,) will paint the store and

modernize the fixtures; will invite the sunlight and the people. A new business will then appear, and patrons will occasionally smile as they speak of the peculiar old pharmacist who refused to move on, whom the ladies shunned, the children shuddered at, the men passed by and physicians detested.

Doubtless the majority of us will modernize ourselves under the pressure of circumstances, and accept the good old Baptist doctrine of "what is to be will be," and move on with the throng; but I suspect that each locality will have its relic. To me there is something touching in this isolated, quaint and persistent man who refuses to read the handwriting, covers his face at the present, turns his back to the future and lives in the past. I view him as a man of opinions and a man of courage; a man who dares to do what he believes to be right and perhaps suffers to maintain the standing of his profession as he views the matter and uphold the name pharmacist where there are, as he believes, so few pharmacists. Do not doubt his honesty; do not doubt his motives; he is very sincere, and if you will become acquainted with him you will find that from his store of knowledge there is much to learn that you cannot get elsewhere, and you will find him far from being as cross and petulant as the world believes him to be. Perhaps he is not even sad, for he may carry in mind the prosperous pharmacy days of former years and review them with pleasure. He may not be companionless; more than one aged friend will be found to spend hours in his dingy shop, and together they enjoy themselves with few interruptions. In his family he will be found undoubtedly loved, perhaps deemed peculiar but nothing more, and it may be that you will find that his shop is his recreation and that he enjoys the apparent misery of his den. You may find that it would be fatal to disturb him.

Perhaps some persons may think that I have pictured an ideal figure, but others will refer to some character who may be faithfully portrayed. Not one city, but all that are of any age, have these connecting links between the past and the future; not one such man exists alone, there are many.

We look at this picture of the old, old time and forget ourselves. We think that we learned the modern part of the profession of pharmacy, and forget that history repeats itself and that the hand is

still writing as in the past; that the years fly swiftly. We think that only the old-style pharmacist can be obsolete, and at the same time we unconsciously growl at the innovations of the young generation. We oppose the "new-fangled notions," and we may combat the new ideas of pharmaceutical education and compare them with the day we were apprentices. Some of us may oppose college learning and condemn the fact that pharmaceutical journals thrive and multiply, referring to the time when in our younger days one journal issued every two months was sufficient for the country, and but two colleges of pharmacy struggled for existence. We may even sneer at the term Ph.D. and Ph.G., and begin to travel in the old, old path that leads to growling at everything modern, and eventually to an isolation where we will serve the coming generation as a zoological specimen, perhaps doing good in an educational manner as exhibiting the difference between the pharmacist of the past and of the present.

I would not have any one think that this is written as a trivial matter. It is not. I am not disposed to make light of such facts, and in my description I have endeavored to confine myself to what I view as facts. I would not thrust a pin into myself, as I really do, when I think of the progress (?) in directions that rub against the grain, because, it is painful to the flesh. It is necessary, though, I think, that we should look at ourselves occasionally, and I ask if *we* are not traveling the beaten road? Do we not criticise the present method of filling our stores with sugar-coated pills, with gelatine-coated pills and capsules? Do we not often oppose the ready-made plaster and lament the days so recently passed away when pharmacists were pharmacists? And do we not sometimes attempt to devise methods whereby the hands of Time may be turned backward and the old styles detained? Do we not think of the time when a few officinal tinctures and syrups, with our staple chemicals and crude roots, barks and herbs supplied us with material with which to fill all prescriptions? Do we not sometimes in a period of vexation sneer and snarl over these, useless to us, so-called elixirs of the present, and do we not get out of patience when physicians prescribe a preparation made by some particular person (not in our opinion a pharmacist) to the neglect of our own preparation that is in our opinion better? Have not some of us tried to check the wheels of

progress, (in our opinion so-called progress,) and have we not occasionally limped to our dens with a crushed toe while the wheel rolled on? Is it not true that many of us have fruitlessly opposed these innovations as they have swept over the country, and that we have viewed with detestation, (perhaps still do,) the great factories where men who perhaps never have pretended to be pharmacists make medicaments, and then under our very protests force us to use them? Have we not sometimes become irritated at a gentlemanly solicitor whose every attempt to dispose of his wares demonstrated the fact that he was not in the least acquainted with the first principle of their production or their properties, and yet whose unpleasant duty it was to travel over the country to encourage us to use them instead of our own?*

Have we not more than once rebelled, and is it not usually to no purpose?

I am speaking now to a body of pharmacists who, as a rule, must perceive that these are facts. We stand together, and I, for one, realize that slowly but surely we will become antiquated if we refuse to move onward, and I know that we are moving onward, and that we struggle to prevent ourselves from being covered with incrustations and to avoid fossilization, we must take the pharmaceutical journals, not one, but several. We must read and study them, and there is something to be learned in the advertising columns as well as the body of the journal. We must study indications and take advantage of each twist of the weather vane. The majority of us will be able to pass on with credit, we must do so if we keep in the path, but it will require an effort, while doubtless here and there an obstinate man will step aside and cling tenaciously to the olden time and serve the coming generation with an example of the pharmacist of other days. We must accept that our pills, ointments, plasters, chemicals, flavors, perhaps even some emulsions, syrups and tinctures will be made for us by men we call artisans. We must become artisans if we

*More than once I have cautiously shown a solicitor the error of his belief or have endeavored to instruct him to his advantage. Sometimes these interested gentlemen have gone with me to my laboratory and have been thankful for the attention. Traveling agents, as a rule, are gentlemen; they learn and teach, and help to move the world of commerce and of ideas. In turn I am often instructed by them.

compete, and we must, perhaps, adopt their methods or perish as progressive pharmacists.

Our future field as pharmacists seems to be in mixing and supplying such substances as we can carry to advantage in our stores, unless the science broadens, or we step into specialty making; and to oppose these innovations seems to be to slap at the hand of destiny that is writing on the wall so that "he who runs may read." To many these changes in our profession are unconscious and uncared for, but to many others they are painful, very. I am led to these remarks by the seemingly universal feeling among old pharmacists, that the profession is becoming demoralized. The change has not been abrupt, it is gradual; but as we make comparisons between intervals of time, it appears to have been made by jerks. In my opinion, we must be prepared to meet as great a revolution, (advancement or retrogression as you view it,) in the near future as in the past.

I can see that we will continue to suffer, and those who rebel will do so at the expense of aching hearts. That our profession is not in a condition to rest on its oars, is evidenced by the attention physicians give to new ideas and new remedies; by the facility with which the grocery or dry goods men adapt themselves to the absorption of sections of pharmacy or so-called pharmacy, (which lives nevertheless;) by the obsolete remedies of the past, and those of the present that are nearly stagnant on our shelves; by the synthetical chemicals, (patented, if you please,) that are displacing Nature's products and that take from us a demand for old-fashioned pharmaceutical manipulation. These and other causes lead me to believe that unless we move quickly we will fall behind, and that instead of kicking against the pricks, it behooves to be graceful and accept that the hand of destiny is writing.

Finally, I will add that those who oppose this continual change are, as a rule in my experience, the best of pharmacists; educated, thinking men, who have a foundation for their arguments, whom all should honor, and in no wise should their earnestness be questioned. Often (usually) these men begin the study with superior educations and maintain their position to the end and are aware of their advantages. I venture to say that in nearly every instance it will be found that these tenacious men are well informed, and that it is not because of

ignorance or indolence that they refuse to gracefully accept present methods, but because of honor to themselves and respect for their profession. Some live in constant hope that the pendulum will swing back again; some may even think they observe indications of a change, but I will confess that it seems to me as though the past will not return in this generation. The methods and means by which medicines are made, sold, prescribed, advertised and dispensed appear to me to pass each year further from the accepted legitimate pharmacy of other days—and with irresistible motion.

PRESSED HERBS.

BY JOSEPH FEIL, PH. G.

Cleveland, O.

QUERY No. 5.—*What is the general quality of the Pressed Herbs of the market?*

Pressed herbs and parts of plants can be found in every drug store in this country, and while not having a great sale, yet the aggregate must count up to a very large number of pounds during the year. The pressers of these goods are energetic business men and have succeeded in introducing their wares not only to the retail trade, but even many jobbers prefer to handle nearly all crude vegetable drugs in this form.

The advantages of the pressed goods are evident enough: the goods are clean, neatly put up, there is no loss in weight, usually packed when fresh, and when impressed with the name of a reliable house, can be depended on for at least a fair and usually an excellent article. The extent to which this branch of the drug business has grown can be inferred from the variety of drugs thus put up by the different firms, counting three lists I obtained the following totals, viz: 418, 397 and 276.

While the kinds pressed are many, yet only about twenty have any extended sale: The following list of the very salable ones is compiled from information obtained from the following firms, to whom I am also indebted for other valuable information contained in this paper, viz: Parke, Davis & Co.; Allaire, Woodward & Co.; B. O. & G. C. Wilson; Peek & Velsor; Cheney & Myrick; Walter Adams & Co. and Liebman & Butler.

The order is in proportion to their sale.

- | | |
|----------------|--------------------|
| 1. Boneset. | 11. Hops. |
| 2. Catnip. | 12. Stramonium. |
| 3. Hoarhound. | 13. Elder Flowers. |
| 4. Pennyroyal. | 14. Scullcap. |
| 5. Sage. | 15. Foxglove. |
| 6. Tansy. | 16. Spearmint. |
| 7. Peppermint. | 17. Dandelion. |
| 8. Mullein. | 18. Burdock. |
| 9. Thyme. | 19. Golden Seal. |
| 10. Wormwood. | 20. Lobelia. |

All the firms report No. 1 to 7 inclusive as the best sellers, and one firm says: "Canada uses especially large quantities of Mullein, Lobelia and Stramonium."

It was impossible to examine packages of all these and of the different pressers, hence whichever could be obtained from retail stores of Nos. 1 to 7 of different firm's packages were examined.

The packages, as a rule, are very neatly put up and distinctly labeled, and frequently synonyms, German and French names, medicinal properties and doses were stated.

The weight was full in all cases and in a few instances paraffine paper was placed around the herb inside the outer wrapper.

The synonyms given were taken from the packages, and are given as a matter of curiosity.

Abbreviations used: Wilson, B. O. & G. C. Wilson, Boston; P. D. & Co., Park, Davis & Co., Detroit; A. W. & Co., Allaire, Woodward & Co., Peoria, Ill.; C. & M., Cheney & Myrick, Boston; L. & B., Liebman & Butler, New York; M. & N., Murray & Nickel, Chicago; Botanic Garden, (firm unknown.)

BONESET.

Synonyms: Thoroughwort, Ague Weed, Vegetable Antimony, Crosswort, Feverwort, Indian Sage, Sweating Plant, Thoroughstem, Thoroughwax, Tearel, Thorough Root.

Wilson.—About 1 per cent. spider webs, etc., color bright green, odor good, leaves somewhat thinner than others.

P. D. & Co.—2 per cent. foreign stems, straw, bits of bark, etc., 4 per cent purplish leaves, color dark green, odor good.

A. W. & Co.—1 per cent. foreign stems and barks, 2 per cent. discolored leaves, color green but not bright, odor good.

C. & M.—6 per cent. stems, bits of strings, etc., color bright-green, odor good.

Few fruits were found in all the above.

CATNIP.

Synonyms: Catmint, Catwort, Bamfield, Catswort, Field Balm. Wilson.—Clean, bright-green, much fruit present, excellent.

- P. D. & Co.—3 per cent. medium sized stems, bits of dried leaves, etc., greenish-gray, flowers and some fruit present, odor strong.
- A. W. & Co.—4 per cent. rather thick purplish stems, feathers, oats, etc., grayish-green, more fruit than flowers, odor strong.
- C. & M.—2 per cent. rather thin green stems, color bright-green, fruits quite numerous, quality good.
- L. & B.—3 per cent. thin green stems, greenish with shade of gray, flowers and fruits abundant, quality good.

HOARHOUND.

- Wilson.—1 per cent. straw, etc., color good, mostly leaves, odor strong.
- P. D. & Co.—5 per cent. coarse stems, 1 per cent. foreign matter, color slightly dark, leaves not very wooly.
- A. W. & Co.—1 per cent foreign matter, color good, mostly leaves, not very wooly.
- C. & M.—4 per cent. very coarse stems, 1 per cent. oats, etc., color very bright green, very wooly.
- L. & B.—1 per cent. straw, etc., color, bright, very wooly, nearly all leaves, odor strong.
- M. & N.—15 per cent. stems, color dull grayish-green, scarcely wooly, odor poor, quality very poor.

PENNYROYAL.

Synonyms: Squaw Mint, Stinking Balm, Thick Weed, Tick Weed.
Wilson.—Clean, bright-green, nearly all leaves, odor strong.

- P. D. & Co.—Clean except $\frac{1}{2}$ per cent pebbles, color green, nearly all leaves, odor strong.
- A. W. & Co.—2 per cent dried leaves, earth, etc., 5 per cent thin stems, lightish-green, odor strong.
- C. & M.—2 per cent. stems, dried leaves, etc., 10 per cent. thin stems, color green, odor strong.
- L. & B.—5 per cent. barley, red earth, straw, etc., green, nearly all leaves, odor very strong.

SAGE.

Wilson.—Greenish-gray, nearly all leaves, odor fair.

P. D. & Co.—2 per cent. foreign stems, color grayish-green, nearly all leaves, odor good.

L. & B.—Grayish green, nearly all leaves, odor very strong.

No name.—Half very coarse stems, leaves coarse, odor weak, quality very poor.

TANSY.

Synonyms: Double Tansy, Hindheel.

Wilson.—10 per cent. small green stems, color very bright-green, odor fair.

P. D. & Co.—4 per cent. coarse stems, wilted leaves, etc., color good, odor strong.

A. W. & Co.—Many dried and discolored leaves, dark green, odor fair.

C. & M.—6 per cent. very coarse stems, bright-green, odor strong.

L. & B.—5 per cent. coarse stems, etc., dark green, odor fair.

Botanic Garden.—50 per cent. very coarse purple stems, scarcely a trace of odor, quality very poor.

PEPPERMINT.

Wilson.—Clean, color dark-green, odor good.

P. D. & Co.—Clean, color green, odor strong.

A. W. & Co.—4 per cent. purplish stems, dark green, odor good.

C. & M.—7 per cent. bright purple stems, color very bright-green, odor fair.

L. & B.—2 per cent. stems, green, odor good.

From the descriptions it is hardly possible to tell fully just how much the herbs differed from each other, for there are many things tangible to the eyes and nose in this case, that are nearly impossible to describe, but taking an absolute grade as 100, the following table will give relative value of these goods.

Wilson,	-	-	98.
P. D. & Co.,	-	-	95.
L. & B.,	-	-	94.
A. W. & Co.,	-	-	90.
C. & M.,	-	-	88.
M. & N.,	-	-	50.
Botanic Garden,	-		25.
No. Name,	-	-	20.

CONCLUSIONS.—

1. The pressed herbs of the market are true to name.
2. The general quality is good, especially those sent out by reliable houses.
3. It is possible to get almost ideal goods.
4. Goods without the name of a known firm should be rejected.
5. When kept for sometime in stock they are better preserved than loose herbs.

Mr. Rosewater—Were these herbs just one lot from each house, or were they gathered at various times? That is, take for instance, Horehound—were they taken from different lots of the same firm's goods at different times of the year sent out, or were they simply accidentally taken at one time?

Mr. Feil—In reply, I will say it is various. I could not find, sometimes, dealers in the city who had more than one of each kind. But I tried to make examinations of different packages. These examinations were made within the first four months of this year, from January to May. I am led to believe that these houses get their stock in during the time the herbs are gathered fresh and pack them at that time. However, that this would not affect the quality much would be gathered from a paper recently prepared by Mr. Todd. Mr. Todd, who is a large distiller of peppermint oil, thought he would test the herb after it had been gathered for some time. So he gathered some and divided it into two parts. One part he distilled immediately after he gathered it, and the other part he kept and dried for six months. He found the relative proportions of oil to be practically the same. The dried herb, however, yielded a slightly smaller proportion. On the other hand, he considered there

was more menthol in that, and on the whole his conclusion was that the oil distilled from the dried herb was better. Judging from the goods as an average, each house seems determined to put up a certain quality, and they put up just that quality. For instance, take Wilson's herbs. When I took them and put them all together I could see generally that their herbs were better in color than the others. It has been suggested that some of the firms could put some of the essential oil of the herb to it. I doubt it, but of course it could be done. And they have taken far more pains to take out the stems than the others. And so through the list; whereas, those without any name were very poor. It almost seemed as though they had purposely added stems to the herbs to increase the weight. So I judge that each firm has a standard which it pretty well adheres to. This information, you will please take notice, is from my own examination. I have no knowledge from any of the houses. The only knowledge I have from the houses is in regard to those herbs which they sell. I supposed that very many of the herbs had a large sale for the reason that the houses quoted so many, but I found that very few had a large sale, and still fewer had an extensive sale.

The President—We have representatives of a few of those houses present with us. We would like to hear remarks from some of these representatives. There is a member of our own Association here from whom we would be pleased to hear.

Mr. Bellermann—Mr. President and gentlemen, I am very much pleased with this paper. In fact, I should commend it to other members of the Association, that when they are reading a paper comparing goods on the market, it would be much better for each firm if they would make a statement as to what firm was being commented on. If anybody is doing good, it gives that man credit. I am pleased to hear that B. O. & G. C. Wilson have deserved their reputation. I believe that they are generally acknowledged to issue the finest herbs, and at the same time they ask the highest price. I do not think that Parke, Davis & Co. have endeavored to create the reputation that Messrs. Wilson have. They have endeavored to give you the drug just as the Pharmacopœia, if it is official, indicates it should be. That is, if, in the case of boneset, for instance, the flowering tops are ordered, they give you the flowering tops. If in

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gathering those tops there should be stems, of course they are included. As the gentleman reading the paper said, each house seems to make a special standard for itself, and speaking of Parke, Davis & Co., particularly, I think that is about the standard that they try to produce. In regard to keeping the drugs—the suggestion of Mr. Rosewater that they should have been examined in different seasons of the year—I do not think that that would have made any difference. I know, in our case, our endeavor is to obtain our supplies at the season of collection. With that object in view, we have recently established an agency under the superintendence of Prof. Hand, at Charlotte, N. C., for the purpose of collecting the crude material in that district at the proper season. We could not depend upon the wholesale drug market for our supplies; it is entirely too uncertain. I should not be a bit surprised if other dealers do likewise.

POWDERED OPIUM.

BY JOHN J. BUEHLER,
Cincinnati, O.

QUERY NO. 12.—*Is Powdered Opium, sold in bulk, up to the Pharmacopœial requirements?*

Until about two years previous, all powdered opium supplied to the retail trade, was furnished by the wholesale dealers, in paper packages mostly, or in bottles, which were simply labeled according to contents without reference to percentage strength in morphine.

The last revision of the Pharmacopœia requires that powdered opium shall contain not less than 12 per. cent. nor more than 16 per cent. of morphine, when assayed by a process which it gives.

About two years ago, the principal drug-millers, to furnish an article complying with the official requirements, began to supply this drug in sealed packages of one pound or less, the label bearing the percentage value of the contents in morphine.

The distribution of powdered opium in this manner has become almost universal, so that only a small part of the total is sold in bulk, that is, not under an assay label or one giving some indication of the strength of the sample, and this has come to be looked upon with suspicion. Hence the query, is powdered opium, sold in bulk, up to the Pharmacopœial requirements?

Inquiry of the best wholesale druggists of this city revealed the fact that powdered opium, bought and sold by them in bulk, was obtained by them from the same drug-millers that supplied them with the article in original packages bearing an assay label. Powdered opium, "in bulk," as obtained through reliable dealers, should, therefore, be identical with that sold under an assay label, and assays of commercial specimens show this supposition to be, at least approximately, true.

Eighteen samples of powdered opium, either prepared or sold by Powers & Weightman, McKesson & Robbins, Lehn & Fink, Dodge & Olcott, Wm. S. Merrell Chemical Co. and Lloyd Bros., were assayed by the U. S. P. process, the results appearing in the following table, in which specimens not bearing an assay label, or other indication of morphine strength, are classed as "bulk."

Number of Specimen.	Maker or Vender.	Place where obtained.	MORPHINE PER CENT.		
			U. S. P. PROCESS.		Squibb's Process. (Calculated.)
			Indicated.	Found.	
1.....	A.....	New York.....	Bulk.	14.0	15.61
2.....	A.....	New York ...	Bulk.	13.6	15.16
3.....	B.....	Cincinnati	13.0	13.0	14.50
4.....	B.....	Cincinnati	U. S. P.	13.0	14.50
5.....	B.....	Cincinnati	U. S. P.	13.0	14.50
6.....	C.....	Cincinnati	13.0	11.0	12.26
7.....	C.....	Cincinnati	13.0	11.0	12.26
8.....	C.....	Cincinnati	13.0	11.0	12.26
9.....	C.....	Newport, Ky....	U. S. P.	12.0	13.38
10.....	C.....	Newport, Ky....	U. S. P.	11.6	12.93
11.....	D.....	Cincinnati	Bulk.	11.0	12.26
12.....	D.....	Cincinnati	Bulk.	11.0	12.26
13.....	E.....	Brookville, Ind..	U. S. P.	13.0	14.50
14.....	E.....	Brookville, Ind..	U. S. P.	13.4	14.95
15.....	F.....	Cincinnati	Bulk.	10.0	11.15
16.....	F.....	Cincinnati	Bulk.	10.0	11.15
17.....	F.....	Cincinnati	Bulk.	10.0	11.15
18.....	F.....	Cincinnati	Bulk.	11.0	12.26

Inspection of the table will show that a part of those classed as bulk are much below the lowest limit of official strength. As these are very uniform in percentage of morphine, (10 per cent.,) they were probably sent out by one drug-miller, but neither the maker nor the seller could be identified. The remainder equal in strength the samples sold under an assay label.

According to the law regulating the importation of opium, no opium can be admitted into this country that contains less than 9 per cent.

of morphine. As opium nearly always contains very near 20 per cent. of water, the powdered drug must contain not less than 11.25 per cent. morphine.

Of the commercial powders assayed for this paper, one-half contained less than 11.25 per cent. morphine—six, 11.0 per cent., and three, 10.0 per cent.

Were these samples reduced or adulterated by addition of other material?

As the proportion of water-soluble matter was not estimated, or other tests of purity made, the only reliance, in answering this question, is the percentage of morphine.

The U. S. P. process of estimating morphine in opium, gives results which, while very constant, are at the same time much below the truth. Other methods yield products of equal purity and in much greater quantity, the results being equally constant. And the best of these, in the experience of the operator, is that of Dr. Squibb. That used by the Government examiners differs from this chiefly in the use of hot water in extracting the drug. Hence, we may safely compare the U. S. P. process with that of Dr. Squibb for the purpose of determining the actual morphine strength of these samples and, therefore, their probable purity.

A sample of pure powdered opium gave, in a number of assays by the U. S. P. process, for the highest result, 13.02 per cent. morphine, and for the lowest, 12.99 per cent., thus containing just 13.00 per cent. morphine. It was then assayed by Dr. Squibb's method. In the first assay, the time of precipitation was extended to 15 hours, when the crystals were collected, washed and dried. The weight indicated 14.65 per cent. morphine, but the product was not entirely soluble in lime-water. A second assay, stopped at 12 hours precipitation, gave 14.57 per cent., the matter insoluble in lime-water amounting to about one-half that of product of first assay. A third assay made under the same conditions, gave 14.58 per cent. In the fourth, the time of precipitation was extended to 36 hours. The result showed much over 15 per cent., but a very large part of the precipitate was insoluble in lime-water. These results showing that in all cases the time of precipitation was too long, by which other substances than morphine were thrown out of solution, a fifth assay was

made. The mixture was frequently shaken during the first hour of precipitation, and the crystals collected at the end of 9 hours. The product equalled 14.4 per cent. and was completely soluble in lime-water. The result is, doubtless, too low. This powdered opium, therefore, contained about 14.50 per cent. morphine, or 11.5 per cent. more than was shown by the U. S. P. process.

If this addition be made to the 11.0 per cent. samples, they will show 12.26 per cent. and will be within the officinal requirements, though not in all cases up to the percentage claimed. The 10.0 per cent. samples will show 11.15 per cent. This figure is so near 11.25 per cent. that the difference may be due to error of experiment, and the samples really be up to legal but not to officinal requirements. It thus appears that all these samples may be pure, although their purity is not fully made certain.

From these data we conclude that commercial powdered opium sold in "bulk," as obtained through good dealers, is up to Pharmacopœial requirements and is identical with that sold in original packages or under an assay label.

There is also offered for sale a powdered opium, which, if pure, is produced from opium of the lowest grade, barely meets legal requirements and is much below the limit of officinal strength.

With this exception, all powdered opium sold in bulk is fully up to the officinal requirements, and its quality is assured if it is obtained through responsible dealers.

COMPARATIVE SOLUBILITY OF BRANDS OF EXTRACT OF LICORICE.

BY E. GOODMAN,
Cincinnati, O.

QUERY No. 14.— *What is the Comparative Solubility of the different Brands of Extract of Licorice?*

This is rather a personal question, but I do not intend to make it such. To begin, would like to make a few preliminary remarks as to the conditions under which the examinations were made. I neither favored nor was prejudiced toward any particular brand or brands; the examinations were made impartially and as accurately as it was possible for me to do. I adopted three different methods. I could not give my undivided time to this, but the work upon it had to be sandwiched in between the routine work of the store.

I tested all the various brands I could obtain, viz.:

P. S. Corigliano, Solazzi, Y. & S. Scudder, M. & R., L. & F., Powdered Licorice and Licorice Lozenges.

With the object in view of obtaining "Purified Extract of Licorice," I exhausted 1 lb. (Av.) each of the first six named brands of Licorice. I started all six at the same, in the room and in the same sized percolators, so as to make all the conditions alike in each. Having broken the Licorice into pieces about 1 or 1½ inches long, and split each piece lengthwise, I packed each brand in a quart percolator, the neck of which was fitted with a plug of absorbent cotton. For each pound of Licorice I used 1 oz. of clean, Excelsior packing, putting in alternate layers of Excelsior and Licorice and a layer of Excelsior on top; then stopped the orifices of the percolators with corks and filled each with water. Drew off the solution after 15 hours, for the first three days, then every 30 hours for the rest of the week. The second week, I drew the liquor off every 48 hours; after that every third day for four weeks longer. Reserved the first two gallons of concentrated solution and evaporated the rest on a water bath, as fast as it was drawn off. After six weeks most of the brands were almost entirely exhausted and the others nearly so; could not continue the

percolation any longer on account of the fermentation which began to set in. After allowing the masses to drain in the percolators, dumped each out upon a separate piece of paper and covered them with the same; placed 3 at a time upon a large board, alongside of the stove to dry. After 4 or 5 days, when the mass was so dry as to break readily between the fingers, I weighed each separately, allowing 1 oz for the Excelsior, with the following results: P. S., 25.1 per cent., 28.7, 29.8, 27.8, 29.26, 30.8 per cent. the first three being foreign brands, the latter three, domestic. Being a little dubious about the results, fearing that some of the finer particles might have passed through the cotton, I determined upon a verification process, by macerating one Troy oz. each of the above brands, as well as one Troy oz. of Powdered Extract of Licorice and Licorice Lozenges, and then filtering through paper. The remaining brand, whose precipitate was exactly similar in appearance and weight to *the one*, which characterized itself from all the others, by producing a nearly white, very fine precipitate, while the other precipitates had a sandy or muddy appearance, is undoubtedly the same Licorice, but branded with the name of the firm for whom it was made. I macerated the Licorice reduced to fine particles, for 10 days in quart packers, filled with water, shaking occasionally; then filtered through weighed filters and dried the same upon a water bath until they ceased to loose weight. The filtrate I treated with Sulphuric Acid to precipitate the Glycyrrhizin, and the results being only relatively required, it was not necessary to purify the Glycyrrhizin, as the relation would still remain, but would only reduce the quantity, which was already small. The results in the foreign brands differed but slightly from the original method on $14\frac{1}{2}$ times the quantity, but in the domestic brands there was quite a difference, with the exception of one brand, the Y. & S. The reason for this is seen in the process of maceration, the residues of the imported Licorices being in flat scales, while that of the domestic are very fine, heavy, pulverulent and will therefore readily pass through the septa. Let us first tabulate results and then draw conclusions:

Insoluble residue from 1 lb (Av.) Licorice by per cent.		Insoluble residue from 3 (Troy) same Licorice by maceration.		Glycyrrhizin from Corre- sponding Licorice.		
P. S. 25.1 per cent.	} Imported.	P. S. 26.25 per cent.	} Imported.	P. S. 5 per cent.	} Imported.	
28.7 "		26.85 "		4.93 "		
29.8 "		26.67 "		6.5 "		
27.8 "		42.08 "		9.3 "		
29.26 "	} Domestic.	37.05 "	} Domestic.	9.5 "	} Domestic.	
Y. S. 30.8 "		Y. S. 29.00 "		Y. S. 10.0 "		
		42.1 "		9.3 "		
		Powdered 32.3 "		Average: tare on filter was destroyed by acid; only a trace.		
		Lozenges 40.0 "				

From these results one would naturally conclude that the foreigners exhaust their Glycyrrhiza without the addition of an Alkali, while the Americans add an Alkali to their menstruum. The reasons are twofold:

1st. The domestic brands contain nearly double the amount of Glycyrrhizin of the foreign brands.

2d. The imported Licorice, not being treated by an Alkali, the menstruum does not so completely dissolve out the gluten, thereby retaining the starchy matter in an agglutinative state, in which condition it does not so readily pass through the septum, as shown in the scaly, tenacious residue of the foreign, contra the pulverulent residue of domestic brands.

3d. From what little experience I have had in making Extractum Glycyrrhizae Purum, U. S. P., I find that considerable extraneous matter comes from the cortical layer of Glycyrrhiza.

If these conclusions of mine prove correct, then Ammonia, while it facilitates the solution of Glycyrrhizin, also facilitates the introduction of starchy or insoluble matter.

The foreign brands are the best from a commercial standpoint, while the domestic excel them as pharmaceutical products. The former,

besides being more soluble, also have a richer flavor, whether natural or artificial, I am not prepared to say; they also give dark brown transparent solutions, while the solutions of the domestic brands are lighter and opalescent, which may be another sign of the presence of gluten. From the foregoing it will be seen that the *relative* solubility and value narrows down between foreign and domestic brands, those from the same continent being about of equal value.

Time required—from first week in February to first week in June.

BY S. W. MCKEOWN,
Youngstown, O.

QUERY NO. 14.—*What is the Comparative Solubility of the different Brands of Extract of Licorice?*

Five specimens were taken for examination. One-half gram of each brand was weighed for the purpose of determining the soluble and insoluble matter. After digesting in pure distilled water for 24 hours at a temperature between 60° and 70° Fah., and with occasional stirring, the solution was filtered through No. 1 Swedish filter paper, the insoluble washed with water and thrown upon the filter and all washed until the washings came through the filter colorless. The insoluble portion, together with the counterbalanced filters, through which it was filtered was then dried in a hot water oven until weight was constant. The aqueous solution was evaporated to *complete* dryness in a tarred platinum dish and weighed. The loss was assumed to be water. The results were as follows:

	INSOLUBLE.	PURE EXTRACT.	WATER.
Corigliano.....	25.20	60.30	14.50
Scudder.....	34.77	56.36	8.87
Y. & S.....	24.65	58.46	16.89
Lehn & Fink.....	31.08	54.60	14.32
Mellor & Rittenhouse.....	31.03	60.15	8.82

In the Mellor & Rittenhouse, Lehn & Fink and Scudder brands, the insoluble was found by means of the microscope to be largely composed of Corn Starch, while Wheat Flour was recognized in the Y. & S. No Starch grains could be detected in the Corigliano.

In order to estimate the *Glycyrrhizin*, 2 grams of each specimen were treated as before described, with pure distilled water, filtered, and the Glycyrrhizin precipitated with Sulphuric Acid. The precipitate was filtered and washed slightly, redissolved in dilute Ammonia,

and again precipitated with Sulphuric Acid filtered through counter-balanced filters, washed with dilute Acetic Acid, dried in a hot water oven until weight was constant. The process was repeated on another set of samples, using a 10 per cent. solution of Ammonia to exhaust the drug. The following results were obtained :

	Glycyrrhizin with pure water.	Glycyrrhizin with NH ₄ .
Corigliano	2.90 per cent.	4.42 per cent.
Scudder.....	2.75 "	6.15 "
Y. & S.....	2.95 "	7.63 "
Lehn & Fink	8.40 "	9.07 "
Mellor & Rittenhouse	8.37 "	8.92 "

It is not claimed that the Glycyrrhizin obtained by the above treatment was strictly pure, but it was thought that any attempt to further purify it would be attended with a loss greater than the impurity would amount to. Comparative results were all that was aimed at, and working upon the same sample, they were found to be quite uniform.

A specimen of select Licorice Root was treated according to the process given in the U. S. Pharmacopœia for Extractum Glycyrrhizæ Purum, and the Glycyrrhizin determined by the Sulphuric Acid method. Results, as follows :

Pure Extract.....	35.69 per cent.
Glycyrrhizin.....	5.31 " "

The percentage of Glycyrrhizin to the pure extract is 14.86 per cent., equivalent to 8.85 per cent. of a commercial extract similar in composition and moisture to the Mellor & Rittenhouse.

It will be observed that in two of the brands of Extract of Licorice, from 56 to 62 per cent. of the Glycyrrhizin is *insoluble* in pure water ; while in two other brands all but 6 to 8 per cent. is soluble without the addition of Ammonia.

It is a noticeable and curious fact that the highest priced brand of Licorice in the market contains the smallest percentage of Glycyrrhizin.

OLEUM MENTHÆ PIPERITÆ.

AZOR THURSTON,

Grand Rapids, Ohio.

QUERY NO. 15.—*Test the Oil of Peppermint; is the Dementholized Oil sold as Pure Oil of Peppermint?*

To answer the above query one would naturally look to the standard of authority, the U. S. P., for tests as to purity, etc. In doing so we find the following:

“A volatile oil distilled from Peppermint. A colorless, or yellowish or greenish yellow liquid, becoming darker and thicker by age and exposure to air, having the characteristic, strong odor of Peppermint, a strongly aromatic taste, followed by the sensation of cold when air is drawn into the mouth, and a neutral reaction, sp. gr. about 0.900. It is soluble in equal weight of Alcohol.”

The above pharmacopœial description of Oil of Peppermint is similar to that given by a number of other volatile oils. The sp. gr. 0.900 is the same as given for oils of eucalyptus, spearmint and rosemary. “A colorless, or yellowish, or greenish-yellow liquid with a neutral reaction” could be applied to nearly all of the volatile oils.

Nine samples of oil of peppermint were examined, as follows:

	Nitric Acid.	Alcohol+ HNO ₃	Con. H ₂ SO ₄	Dil. Alcoholic H Cl.	Picric Acid.	Sol. Br. in CH Cl ₃	Iodine.	Chloral Hydrate+ H ₂ SO ₄ + Alcohol.	Alcohol.	Heated on Paper.
1	Yellowish Brown, turn- ing Blue.	Blue to Violet.	Brown turning to Violet.	Rose-Pink.	Grass- Green.	Reddish- Violet.	Vapor invisible.	Cherry Red.	Clear Solu- tion.	Volatizing without stain.
2	Yellowish Brown.	Blue to Violet.	Greenish Brown turn- ing Red.	Rose-Pink.	Grass- Green.	Reddish- Violet.	Vapor almost invisible.	Brownish Red.	Milky.	Leaves stain.
3	Brown changing to Violet.	Blue to Violet.	Brown turning Red.	Rose-Pink.	Grass- Green.	Violet turning Brown.	Slight re- action.	Brownish Red.	Milky.	Leaves stain.
4	Blue Violet.	Blue to Violet.	Brown turning Red.	Purple.	Grass- Green.	Reddish- Violet.	Slight re- action.	Brownish Red.	Milky.	Leaves stain.
5	Brown to Violet.	Blue to Violet.	Brown turning Red.	Pink.	Grass- Green.	Reddish- Violet.	Vapor invisible.	Cherry Red.	Clear.	Volatizing without stain.
6	Brown changing to Blue.	Blue to Violet.	Brown turning Red.	Pink.	Grass- Green.	Violet turning Greenish.	Vapor invisible.	Cherry Red.	Clear.	Volatizing without stain.
7	Brown changing to Blue.	Blue to Violet.	Brown turning Red.	Pink.	Grass- Green.	Violet turning Brownish.	Vapor invisible.	Cherry Red turning Brown.	Milky.	Leaves stain.
8	Brown changing to Blue.	Blue to Violet.	Brown turning Red.	Pink.	Grass- Green.	Violet turning Brownish.	Vapor invisible.	Cherry Red.	Milky.	Leaves stain.
9	Brown changing to Blue.	Blue to Violet.	Brown turning Red.	Pink.	Grass- Green.	Violet turning Blue.	Vapor invisible.	Red, immediately turning to Yellowish Brown.	Milky.	No stain.

Nitric Acid test gives the best results by adding one drop of the acid to 40 or 50 of the oil. At first the color is brown, but turns blue or blue violet within one or two hours. The same color reaction is given with Nitric Acid and Alcohol. One drop of Nitric Acid to 20 or 30 drops Alcohol and one drop of the oil. Oil of Pennyroyal does not give color test with the above test.

Concentrated Sulphuric Acid (2 or 3 drops to 1 of oil) gives a brown color, with oil of Peppermint, turning to a fine red after some time. Con. H_2SO_4 produces same color with oil of caraway, mentha crispa, sweet marjoram, star-anise, mace, dill, juniper, cubebs, copaiba, sage, wintergreen, lavender, cascarilla, nutmeg, thyme, sandalwood, myrrh and parsley (Dragendorff.) Dilute Alcoholic Hydrochloric Acid, add 15 to 20 drops to 1 of oil in a test tube. Gives a red color, turning blue after a few minutes. Care should be taken to use dilute alcoholic HCl, as the concentrated will give very different results with different oils; for instance, with oil of turpentine, the concentrated alcoholic HCl would produce a cherry red color, while the dilute does not give a color test with oil of turpentine.

The dilute alcoholic hydrochloric acid produces a rose to a deep red or reddish violet with oils of cubebs, pepper, copaiba, cedarwood, cinnamon, nutmeg, thyme, laurel, sweet-flag and myrrh, (Dragendorff.)

Picric Acid gives a deep grass green with oil of peppermint.

Solution of Bromine in Chloroform (1—20) gives rose, red or reddish violet with oil of peppermint. Same color re-action with oils of rosemary, fennel, anise, star-anise, cinnamon, nutmeg, thyme, parsley and myrrh, (Dragendorff.)

Iodine—Add 2 or 3 drops of oil to a few grains of re-sublimed iodine, very slight re-action with pure oil of peppermint, vapor almost invisible. This test is the one used to show the absence of oil of fireweed, oil turpentine, oil camphor and other terebinthinate oils, as they give brisk re-action with iodine.

Chloral Hydrate and Sulphuric Acid and Alcohol—Take 1 part H_2SO_4 to 2 parts C, HCl , O.H., O, mix in a mortar; then add a few drops of Alcohol, stir until the mixture is clear. Use this mixture with equal amount of oil, the result is a fine cherry color with pure oil of

peppermint. If the oil is mixed with pennyroyal, the mixture turns to an olive green color.

Alcohol.—Oil of peppermint soluble in all portions in Alcohol, oil of erigerion, turpentine and eucalyptus gives a milky color. Old oxidized oil of peppermint does not dissolve in all proportions in Alcohol, but gives a milky color.

Castor and other fixed oils leave a greasy stain when 1 or 2 drops are evaporated off from paper.

The samples examined were all of good quality, although they did not all give a clear solution with Alcohol. I think it was due more to age than to impurities. When heated on paper, five of the samples left a slight stain.

"Is the Dementholized Oil sold as pure oil of Peppermint?" This part of the question I have not had time and opportunity to answer by experimental work, but there is no doubt dementholized oil has been sold as pure oil in some sections of the country.

The following appeared in the *Toledo Blade*, January, 1887:

"MORE RASCALITY IN MICHIGAN."

"DETROIT, Jan. 29.—A warrant is out for the arrest of Daniel B. Newkirk for fraudulent dealings in peppermint oil. Newkirk is a resident of Wayne, this county, and has been purchasing oil from farmers and selling it in this city to candy-makers and others having use for it. Among his customers was a firm who used the oil for manufacturing menthol. It appears that for nearly three years Newkirk has bought back from this firm worthless dementholized oil, which was then sold to others in the city. The amount of fraud is not known, but it is believed to be about \$20,000."

Fritsche's freezing test is the one generally applied to detect dementholized oil.

Many papers, of late, have been published in reference to oil of peppermint and its adulterations. Among the latest are those of Dr. S. P. Duffield and A. M. Todd, in reference to the use of the polariscope in detecting adulterated oils.

For those that may wish to investigate the subject of oil of peppermint, I append a list of references: A Test for Oil of Peppermint, by E. C. Federer, Ph.C., "Pharmaceutical Era," Vol. I, p. 36; Oil of

Peppermint, S. P. Duffield, Ph.D., same, Vol. I, p. 67; Fraudulent Oil Peppermint, same, p. 95; Dementholized Oil of Peppermint, same, Vol. I, p. 135; Experiments with Oil Peppermint, by E. C. Federer, same, Vol. I, p. 137; Test for Oil of Peppermint, "Western Druggist," Vol. 8, 1886, p. 306; Oil of Peppermint, by Albert M. Todd, same, p. 366. This article may also be found in the "Proceedings Am. Pharm. Association, 1886, Vol. 34, p. 121, and "Pharmaceutical Record," Vol. 6, 1886, p. 363. A Strange Forgery on Michigan Peppermint, by Albert M. Todd, "Pharmaceutical Record," Vol. 6, 1886, p. 204. Essential Oil Papers: The Polariscope as a Revealer of Adulterations, "American Journal of Pharmacy," Vol. 59, 1887, p. 161. Dragendorff Plant Analysis—Action of Iodine on Oil of Peppermint, "Weekly Drug News," Vol. IX, p. 447; Oil of Peppermint — Resinification and Test for Removal of Pipmenthol, "Proceedings American Pharm. Association," 1886, Vol. 34, p. 541.

Dr. Lyons—Mr. President, we in Wayne county, Michigan, are particularly interested in Oil of Peppermint. It has been the practice of some manufacturers of Menthol, perhaps, (we won't say who; we don't know who,) to get rid of their refuse material, dementholized oil, to the farmers of Wayne county, and let it come back through the ordinary channels of trade as pure peppermint oil, which is liable to be a little weedy—that is, to contain a lot of fire weed. The fraud has been carried on certainly, on a large scale, and I am very much interested, in common with others in our neighborhood, in getting at any new methods of determining whether oil of peppermint has been dementholized or not. This paper appears not to have given us anything new. I hope that any members of this Association or any others who want to investigate any particular subject will give us information on that problem. Of course, in making tests, the polariscope is very useful; but very few possess that instrument. It is very easy to make a test with the polariscope, of course. The trechometer is a new instrument which Dr. Duffield has been using, and with very good results, in determining the purity of oil of peppermint; but of course that has the same objections that the polariscope has. What we want is a practical test. The freezing test is one of the very best, but it is open to some objections. I hope that some member of this Association will do work on that subject in the coming year.

MORPHINÆ SULPHAS.

J. GEO. SPENZER,
Cleveland, O.

Notes on a Specimen.

For a year or more price lists have quoted a foreign manufacture of Sulphate of Morphine, at from 20 to 40 cts. discount on the price of other foreign and domestic makes. Jobbers, who were inquired of as to the cause of this, replied that the reasons were:

1. An effort to obtain patronage.
2. That it was heavy and in flakes and did not present that light, feathery form so much desired; but, that for all purposes of dispensing, it was exactly as good as the higher priced article. On these conditions, and following the example of many others, an ounce bottle was purchased for trial; it being for a time, almost exclusively used. After having used it for a period, and when making concentrated solutions as Magendie's hypodermic solution, it was noticed that a precipitate formed at once, or upon standing. This precipitate, which subsequently proved to be Calcium Sulphate, was filtered off and the clear liquid dispensed for hypodermic medication. Complaints, however, were soon lodged against it on the ground that when so used it quite often produced either a troublesome abscess, or a painful and indolent sore.

To ascertain whether it was the patient's peculiar condition, or the Morphine Solution which produced this effect, it was replaced by another make of Morphine, but no ill effects were noticeable; whilst in one case (Lumbago,) two abscesses were produced by separate injections of the first Morphine. Those who had used it think that after the calcium sulphate had been removed by filtration, the solution did not produce such bad results as when allowed to remain; as would be the case when it was made extemporaneously.

It was now in turn to determine the fault of the morphine, and to this end two other makes of sulphate of morphine were obtained for comparison. They will be called 1, 2 and 3. No. 1 being the morphine which caused the trouble, while Nos. 2 and 3 are the samples for comparison. The tests applied were—

1. **IGNITION.**—Morphine should volatilize entirely, (a residue may indicate calcium, magnesium or sodium sulphates.
2. **CAUSTIC POTASH (a).**—Morphine covered with a solution of caustic potash should give a clear solution, (absence of narcotine and codeine, etc.) (b) The solution should be colorless or of a faint yellow color, (absence of foreign alkaloids, sugars, etc.) (c) When heated it should remain odorless, (absence of ammonium salts.)
3. **CONCENTRATED SULPHURIC ACID.**—If morphine be covered with concentrated sulphuric acid and gently agitated, a colorless or faint pink-tinted solution alone should result, (absence of foreign alkaloids and cane sugar.)
4. **REACTION.**—If a crystal of morphine be placed upon a moist piece of red or blue litmus paper, no change in color should be produced, (absence of acids or bases.)
5. **AMMONIUM OXALATE.**—An aqueous solution of morphine should remain unaltered by ammonium oxalate, (absence of lime.)
6. **AMMONIUM PHOSPHATE.**—An aqueous solution of morphine should not be effected by ammonium phosphate, (absence of magnesia.)
7. **ALCOHOL.**—Should give a perfect and clear solution.
8. **WATER.**—Should give a clear solution.

SCHEDULE.

REAGENT.	SUBSTANCE SOUGHT FOR.	1	2	3
Ignition	{ Calcium and Magnesium Sulphates ...	.20%.	28°	.10%.
	{ Sodium Sulphate.....	None.	None.	None.
Caustic Potash...	{ Narcotine and Codeine.....	None.	None.	None.
	{ Foreign alkaloids and sugars.....	None.	None.	None.
Sulphuric Acid....	{ Ammonium Salts.....	None.	None.	None.
	{ Foreign alkaloids.....	None.	None.	None.
Reaction	Acids or bases	Distinctly Acid.	Neutral.	Neutral.
Ammonium Oxalate..	{ Lime	Some.	Some.	Faint trace.
Ammonium Phosphate.	{ Magnesia.	Some.	Some.	Faint trace.
Alcohol.....	Insoluble substances.....	Yes.	Yes.	None.
Water	Insoluble substances.....	Yes.	Yes.	None.

The results of the examination and the effects which the morphine produced, were communicated to the jobber from whom it was obtained. In replying, he said they had had complaints from nearly every customer to whom it had been sold; some stating that in subcutaneous injection alone had it been found faulty; and in conclusion he said they would no longer keep it in stock. From the schedule it will be seen that the morphine No. 1 had an acid reaction and contained calcium and magnesium sulphates. This alone might be explanation enough for the trouble produced, as it is a well-known fact that acid and concentrated injections will produce abscess; but perfectly neutral, weak and harmless hypodermics, in certain impoverished conditions of the blood, as rheumatism and gout, may do likewise.

ETHYL NITRITE.

J. GEO. SPENZER,
Cleveland, O.

Some Experiments on the Color, Boiling Point and Specific Gravity.

Last winter, while engaged in the preparation of Ethyl Nitrite in somewhat large quantities, the conflict of authorities and text books upon the boiling point, color, and specific gravity, which I had observed several years ago, while preparing some experimentally, occurred to me, and I decided to follow a line of experiments, which, although not expecting to alter the dispute one way or another, I hoped would give a happy medium of results upon these points. How well I have succeeded, I leave to your kind consideration.

A short description of the methods used, and a few criticisms on the processes, may be of interest. The methods employed were—

1. Liebig.—Liebig's *Anualen*, Vol. 30, page 140.
2. Emil Kopp.—*Review Scientific*, Vol. 27, page 273.
3. Process of United States Pharmacopœia, 1880.
4. Carey Lea.—*American Journal Science*, 2 ser. Vol. 32, page 95.
5. Grosourdy.—*Journal Chemic Medicale*, or, *Muspratt's Chem.*, Vol. 1, page 834.
6. Feldhaus.—Liebig's *Anualen*, Vol. 126, page 71.

1. Liebig's method is the one given in many of the standard text and reference books, etc., and as far as I can discern, yields a product much above any of the others in purity. It is prepared by passing nitrogen trioxide, (formed by heating starch and nitric acid in a capacious retort,) into a Woulffe bottle containing a cold mixture of 1 part of 85 per cent. alcohol and 2 parts of water, the nitrogen trioxide passing through the alcohol, forms ethyl nitrite, which immediately distills off and is condensed by means of a Liebig's condenser or a Mohr's worm surrounded with a freezing mixture, it is then washed with water to remove alcohol, and dried over calcium chloride.

2. Kopp's method. This is recommended by Beilstein, (Beilstein or Gainschen *Chemic*, Vol. I.) as forming a product which is but

seldom equaled. It is also the method used by Strecker in his researches on the action of caustic potash on Ethyl Nitrite, (Liebig's *Anualen*, Vol. 77, page 331.) It is prepared by adding copper turnings to a mixture of equal parts of nitric acid and alcohol, contained in a retort connected to a cooling apparatus; the action which starts up is sufficient to cause the ether to pass over without the application of external heat. It may now be either washed and dried, or proceed as Kopp directs, viz.: pass the ether in the state of vapor through a wash bottle containing water, which in turn is connected to a calcium chloride drying tube, and this latter to a cooling apparatus and the pure ether collected.

3. United States Pharmacopœia Process: A mixture of alcohol, sulphuric acid and nitric acid, are distilled and the distillate washed with water.

4. Method of M. Carey Lea is similar to the preceding one, with the exception that ferrous sulphate is employed in place of the sulphuric acid.

5. Grosourdy: Use a mixture of either nitrite or nitrate of potassium, alcohol and sulphuric acid; this he heats gently for 48 to 72 hours, when the ether distills over.

6. Feldhaus claims the following method to be the best, after having tried others: A mixture of potassium nitrite, water and alcohol, are poured gradually into a cold mixture of alcohol, water and sulphuric acid contained in a distillatory apparatus; heat enough is produced in the reaction to carry it through and the ether distills off. In methods 3 and 4, some ordinary ether is produced. In 5 a large amount of aldehyde is formed. In all the processes undecomposed alcohol passes over; this is particularly so in 5 and 3.

In 1 and 2, as Watts (Gmelin's Handbook) suspected, and as Smith and Duflos have proved, a small amount of Ethyl Chloride is produced when calcium chloride is used as a drying agent. The following general method was used in purifying the products of the several methods, viz.:

The distillate was shaken with one-third its volume of ice water, vigorously, three successive times. After the third washing, the ether was separated as much as possible by means of a separatory funnel, and the washed ether shaken occasionally in one-half hour with pure

recently ignited potassium carbonate, allowed to settle, decanted into a dry flask and distilled. During this treatment, No. 5 alone browned the potassium carbonate used. The weight of authority, and all the standard chemical works, give the color as a light yellow.

Grosourdy and Courbe, however, contradict this. Grosourdy, (*Journal Chemic Medicale*, or, *Muspratt's Chem.*, Vol. I, page 855,) refers the color to a hydrocarbon, and says it may be removed by repeated distillation from potassium carbonate. Some Ethyl Nitrite was prepared according to Grosourdy's method, following the process out in every detail. A faintly yellow straw-colored liquid was collected in the receiver; when this was shaken with ice water, however, it at once diminished in volume and formed two layers, an upper layer of a bright yellow color the exact counterpart of Ethyl Nitrite, and a lower colorless layer, a mixture of alcohol and water. This upper layer was now subjected to six distillations with potassium carbonate; the distillates kept growing lighter and lighter until the last ones were almost colorless. The boiling point, however, had rapidly risen from 60° to 78° C. It burned, and otherwise denoted its alcoholic nature. If the almost colorless liquid be shaken with ice water, or, if before each redistillation, the distillates be washed with water, a yellowish liquid will always separate out. The decomposition of the ether by distillation with potassium carbonate, is well-known, and was proven on the ether of all the processes.

Courbe said the color was due to an oil which could be removed by successive distillations from sugar.

For the purpose, white rock candy was powdered and boiled with some Ethyl Nitrite made after Liebig's method, in a flask connected with a reverse condenser, for two hours, when it was distilled off and the process continued with a fresh portion of sugar, and again distilled off. This was kept up for a day, distilling 4 times, but no signs of a fading of color presented themselves.

BOILING POINT.

Liebig made the boiling point 16.4° C.				
Mohr	"	"	"	17.5° — 18° C.
Brown	"	"	"	16.6° — 17.8° C.
Thenard	"	"	"	21° C. at 7.30.

Mm. brometric pressure. Strecker (Kurtzes organischen Chem. 2 te auf.) gives it at 16°C .

The following method was used in determining the boiling point:

The ether decanted from the carbonate of potassium was poured into a small Wurtz fractional distillation flask, with a plain neck, around which was wrapped several thicknesses of paper; the flask was now connected to a condenser and fitted with a caoutchouc stopper, through which a thermometer passed into the liquid. In the final determinations, which represent some 50 or more, a Geissler standard thermometer was used.

The heat applied was very gentle, using the palm of the hand, while the temperature of the room in no case was above $+12^{\circ}\text{C}$. and in the greater number of determinations was from $+3^{\circ}$ to $+4^{\circ}\text{C}$. At first, the boiling point was secured by allowing the liquid to boil thoroughly, then allowing it to cool, and again boiling, during which the bulb of thermometer was alternately raised to $\frac{1}{2}$ inch below the orifice of the exit tube, and again lowered into the liquid; this was to see whether the boiling liquid and its vapor were of the same temperature; in the majority of instances they were the same, while in a few only was there an advance of one-tenth of a degree in the boiling liquid. The readings were made as rapidly as possible and with a magnifying glass. The barometric pressure was also carefully noted.

Ethyl Nitrite, prepared according to 1, 4 and 5, was tried in this manner.

Ethyl Nitrite after No. 1 gave in the preliminary a boiling point of 16.5°C ., whilst that from Carey Leas' method gave 17°C . The mean average of all the determinations was 17°C ., this compromises about 70 trials.

To conclude the boiling point determinations, some 6 ounces of freshly made Liebig's Ethyl Nitrite was subjected to fractional distillation.

The apparatus consisted of a Wurtz flask, connected by an adapter to a Mohr's worm, which was surrounded with a freezing mixture. The heat, which was very gently applied to the flask, was sufficient to keep the liquid in a state of constant ebullition, with the thermometer in the liquid, the same began boiling at 13.3°C ., when the boiling

continued vigorously up the 16.3°C. , it required eight minutes to reach this temperature, and $1\frac{1}{2}$ drams of liquid were obtained.

The thermometer was now raised until the bnlb was $\frac{1}{2}$ inch below the opening of the exit tube; it required 15 minutes to raise from 16.5°C. to 16.6°C. At 16.7°C. it remained for 25 minutes, while it required an hour to reach above 16.8°C. Between the temperature 16.3° to 16.8°C. one ounce was obtained.

The rise in the temperature up to 16.9° required one hour, when it ran up to 17°C. 2 ounces had been obtained. The receiver was now changed, and $1\frac{1}{2}$ ounces were obtained at this temperature; at 17.2°C. all of the liquid had distilled over; the barometric pressure was 758.7 mm. Leas' Ethyl Nitrite.

Treated in the same manner, started at 16.1°C. and ran rapidly up to 17.3°C. and finished at 17.8°C. Barometric pressure 759.2 mm. Grosourdy's Ethyl Nitrite.

At 760 mm. barometric pressure distilled between 19.38°C. and 19.88°C.

SPECIFIC GRAVITY.

This was taken at 0°C. by means of a delicate Sprengel Picnometer.

Liebig found the Specific gravity at 15°C.	.947
Brown " " " " 15.5°C.	.900
Mohr " " " " 15.5°C.	.898
Dumas & Boullay " " " " 04°C.	.886

The mean of 6 determinations made :

Liebig's Ethyl Nitrite at 0°C.	.919
Leas' " " " "	.920

This is using the Ethyl Nitrite before fractioning it.

From the results of these experiments, I think it may be fair to conclude :

1st. That Ethyl Nitrite has, as yet, not been made colorless, and that it is light yellow.

2d. That the boiling points 16° to 16.5°C. are probably too low, and that 18.5° — 21°C. are possibly too high; also, that the boiling point given by most French and some German works, 17°C. , is the nearest correct.

3d. The specific gravity of .947 at 15° C. is undoubtedly too high, as it has not been corroborated. That .886 at 14° C. is too low, and that .900 at 15.5° C. is nearest and about right. It is unfortunate that most of the authorities do not say which method was used to prepare the Ethyl Nitrite; and it is here, without doubt, that most of the difficulty occurs, as the products of the several methods, although seemingly similar, when superficially examined, are very dissimilar when closely scrutinized.

These experiments, which extended over a period of five months, were to have been concluded by determinations of vapor density, co-efficiency of expansion and specific gravity at the various temperatures, when they were cut short by the approach of warm weather.

FERROUS CITRATE.

CHAS. P. FENNEL, PH. G.

Cincinnati, Ohio.

QUERY No. 28.—*A practical formula is wanted for a solution of Ferrous Citrate yielding by assay 6.52 per cent. Ferric Oxide.*

In accepting the query, the writer presumed that the normal Ferrous Citrate was intended and that the solution should contain 14.833 per cent. of the anhydrous salt. In conformity with the system adopted in the Revision of the Pharmacopœia the following formula, giving the most satisfactory results, might be considered the answer to the query.

LIQUOR FERRO CITRATIS.

(Solution of Ferrous Citrate.)

An aqueous solution of Ferrous Citrate, ($\text{Fe}_2 2 \text{C}_6\text{H}_5\text{O}_7$); 545.7 containing 14.833 per cent. of the anhydrous salt.

Barium Carbonate, one hundred and sixty parts,	-	-	160
Citric Acid, one hundred and fourteen parts,	-	-	114
Ferrous Sulphate, two hundred and twenty-six parts,	-	-	226
Distilled water, a sufficient quantity,			—

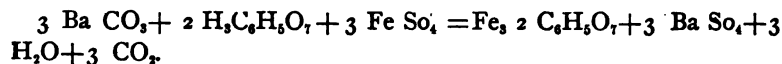
To make one thousand parts,	-	-	-	1000
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Put the various salts into a flask capable of holding the volume of the intended product. Pour upon them (500) five hundred parts of Distilled Water, agitate frequently, and let the mixture stand upon a hot water bath until effervescence ceases; filter through paper into a tared flask, and having rinsed the flask with a little boiling distilled water, pass the washings through the filter: Continue to pass boiling distilled water through the filter until the filtrate shall weigh one thousand parts.

Properties: A pale green liquid, odorless, having a slightly feruginous taste, and an acid reaction. Specific Gravity 1.012. When evaporated at a moderate heat to a syrupy consistence, and spread on plates of glass, it forms dark red scales. When completely incinerated, one hundred parts (100) of solution will leave 6.52 parts of residue.

The solution is not precipitated, but only rendered darker by water of ammonia. The solution deprived of its iron, and the filtrate precipitated by test solution of Chloride of Calcium and heated, a white granular precipitate will be produced, which partially redissolved on cooling of the solution. On adding Test Solution of Ferrocyanide of Potassium, a very light blue precipitate is produced, which soon changes to dark blue. Test solution of Ferricyanide of Potassium produces a dark blue precipitate. The addition of Alcohol produces a light green precipitate, rapidly changing to dark red.

Remarks: The double decomposition being explained by the following equation:



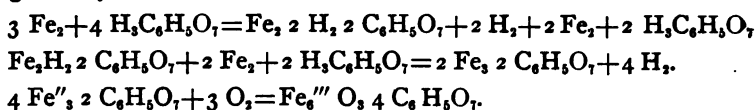
Carbonic Acid Gas being removed by the aid of heat, (water bath), Barium Sulphate removed by filtration, and freed from all traces of Ferrous Citrate by boiling water. Freshly precipitated Barium Carbonate will react more rapidly, but in its application, there must be a positive absence of the base of the precipitant, otherwise double salts will be formed, and furthermore, oxidation will be more rapid and complete, especially if ammonia be that base.

The literature upon the subject of Ferrous Citrate being exceedingly meagre, the writer was induced to investigate the subject more thoroughly.

Theoretically three processes may be employed to obtain the same result, but which, when put to practical test, were found wanting and accompanied with unlooked for obstacles.

PROCESS I. Thus the action of Citric Acid on Iron filings, with the application of heat, and in the presence of a large and constant quantity of water will produce Ferrous Citrate. The process is slow and tedious, and therefore objectionable, since under the continued and combined influences of the atmosphere, water and heat, oxidation takes place; producing one or more of the numerous Ferroic Citrates; owing to its proneness to absorb Oxygen. In the first stage of the process, a dirty white, almost insoluble salt is formed, consisting of Di Ferrous Citrate, $\text{Fe}_2 \text{ H}_2 2 \text{ C}_6 \text{ H}_5 \text{ O}_7, \text{ H}_2 \text{ O}$. This soon changes to slate color, bordering on pale green. As soon as this salt assumes a definite green color its solubility increases, owing to the

generated Ferric condition of Iron. The presence of Iron in the Ferrous condition being readily indicated by the test solution of Ferro and Ferricyanide of Potassium. Oxidation still further increases the rapidity of solution, until the color becomes apple green, which remains constant upon continued boiling, provided the quantity of water remains constant. Evaporated to syrupy consistence and spread on plates of glass, a scaly compound results, dark greenish red in color, insoluble in alcohol, slowly soluble in water. The reactions might be symbolized as follows :



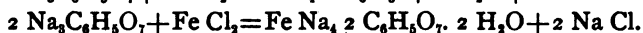
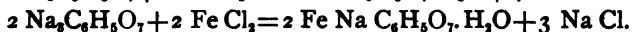
PROCESS II. The application of Ferrous Hydrate or Ferrous Carbonate in place of Iron Filings of Process I, Ferrous Hydrate and Ferrous Carbonate being still more inclined to the absorption of Oxygen can not be used for the preparation of the salt. The production of Ferric Citrate being in excess of Ferrous salt.

PROCESS III. Decomposition of a normal Citrate of the alkali metals with freshly prepared solution of Ferrous Chloride of definite strength. This method presents many difficulties, in as much as double salts are formed of various degrees of solubility, but all more or less green in color.

Ammonium Citrate generated more heat, and the degree of oxidation was more rapid and complete. The salts formed were scaly, green to brown in color, depending upon the ammonia combined, the vapors of which were continually evolved during evaporation. The proper test solutions indicating Ferrous condition. The constitution of the salts could not be determined, but in all probability they are similar to the Potassium and Sodium salts. The Citrates of Potassium and Sodium yielded granular salts, green in color of various degrees of intensity and with no indication of Ferric salt. The Sodium salt being more definite in crystalline structure, the Potassium salt having a tendency to scale. Operating with definite quantities, the salts formed, indicated the following constitution.



The reactions being represented by the following symbols:



PROCESS IV. Decomposition of a normal Citrate of the metals of the alkaline earths Ferrous sulphate. Barium and Calcium Citrate will both answer the purpose admirably, but Barium salt is preferable, since in the process of washing the precipitate formed the Barium salt is insoluble, while the Calcium salt is partially so, and therefore contaminates the final product. The Citrates prepared from freshly precipitated carbonates, containing traces of the precipitants, Ammonium, Sodium or Potassium, respectively, will produce dark green solutions with Ferrous sulphate. The intensity of the color depending upon the quantity of impurity present, for the reason explained under 3d process. In conclusion, it is therefore essential that in the preparation of Ferrous Citrate, according to the given formula from Barium Carbonate, that the latter be free from the alkali metals. Secondly—The Ferrous Sulphate should be pale green, insuring the absence of Ferric salt, and be free from traces of efflorescence. Citric Acid usually meets the requirements of the Pharmacopœia, and needs, therefore, no further caution. The Distilled Water should be as free as possible of atmospheric air. The preparation should be conducted as rapidly as is consistent with the process of decomposition, and the final product should be excluded from light, and kept in well closed and filled bottles to insure its preservation.

POWDERED JALAP AND RESIN.

E. H. W. STAHLHUTH, PH G.,
Cincinnati, O.

QUERY NO. 32.—*Does Jalap entire and Powdered as at present supplied, contain the required percentage of Resin?*

The United States Pharmacopœia requires that Jalap shall contain 12 per cent. of resin, and not more than 10 per cent. of which shall be soluble in ether. The resin being the active constituent, should be abundant. The resin which is soluble in ether, being the griping principle, should be in small proportions.

Fourteen samples of powdered Jalap were obtained in bulk, indirectly from wholesale houses and jobbers, in the cities named. Five kinds of entire Jalaps were examined, which differed very much in general appearance. The entire drug was powdered until all of it passed through a No. 70 sieve.

PROCESS OF VALUATION.

Ten grams (10 gm.) of the drug was exhausted by percolation with 94 per cent. alcohol. The percolator, $\frac{1}{2}$ inch diameter, was fitted with cotton and filter paper; the lower orifice fitted with a rubber tube closed with a spring clip, and the percolator half filled with alcohol. The powder was then gradually poured on the alcohol. As the powder became moistened, it dropped to the bottom of the percolator. This insured perfect moistening and prevented the loss which would occur if moistened in the usual way. The powder was allowed to macerate for twenty-four hours, when percolation was allowed to proceed. The percolate was allowed to flow into a tared 100 c.c. flask until it came up to the 100 c.c. mark. The first 50 c.c. of percolate passed contains all of the soluble portion of the drug; exhaustion was therefore complete.

The resulting tincture was thoroughly mixed, and with a pipette 10 c.c. of it, representing one grain of drug, measured into a small tared flask. The pipette was rinsed with alcohol and rinsings allowed to flow back into the flask containing 90 c.c. of tincture, represent-

ing 9 gms. of drug. The alcohol in this flask was distilled off on a water-bath until the contents were reduced to about 9 c.c. Eighty (80) c.c. of warm distilled water was then gradually poured into the flask, with constant agitation, and the resin allowed to precipitate. When the supernatant liquid had become perfectly clear, it was decanted and 20 c.c. of warm water again added, the resin thoroughly washed in it allowed to deposit and the supernatant liquid drained off. The flask was then heated on a water-bath until vapors ceased to be evolved, and dessication completed over sulphuric acid. The flask being removed from the dessicator, and from time to time the resin scraped loose with a wire, and triturated to a powder with a glass rod and replaced in the dessicator until dehydrated. The flask with contents was then weighed and the per cent. of total resin calculated. Ten (10) c.c. of re-distilled ether, sp. gr., .720, was then poured into the flask, the resin thoroughly triturated allowed to deposit, and the ether solution decanted. This process was repeated four successive times, using the same quantity of ether each time. The flask with contents was then dried as before, weighed, and the Jalapin calculated by difference. The alcohol in the flask, containing the equivalent of one (1) grain of drug, was distilled off on a water-bath, the flask with residue dried as before; weighed, and the per cent. of alcohol extract calculated.

Owing to the delicate constitutions of the two Jalap resins, an acid was not used to accelerate the precipitation. Water alone being used, the precipitation was necessarily tedious, requiring at an average about four weeks' time. The resin precipitated in a honey-like mass. One hundred (100) c.c. of water will probably not remove all of the constituents of the alcoholic solution of nine (9) grams of Jalap soluble therein; the result given would therefore appear to be too high, but as the resins of Jalap are not absolutely insoluble in water, the one error is probably nearly corrected by the other. The convolvulin being absolutely insoluble in ether, it is not affected by the large quantity of ether used in washing it from the Jalapin. The process of evaporation, precipitation, dessication and weighing having been conducted within the same flask, there was consequently no error caused by spurting, sticking to vessels, or accumulation of dust. As all samples were treated in the same manner, with the

same quantities of water and ether, the comparative valuation is probably correct. The samples having been procured indirectly from the source of supply, they represent the state of the market nearer than if obtained through the retail trade.

DESCRIPTION OF ENTIRE JALAP.

No. 15.—Oblong tubers, hard and heavy, weight, $\frac{1}{2}$ to $1\frac{1}{2}$ oz.; larger tubers hollow in center; sp. gr. 1.28; dark brown externally, longitudinally wrinkled, light transverse warts. Internally very dark, very resinous fracture, almost conchoidal.

No. 16.—Irregular, shriveled and contorted; various shapes and sizes; weight 20 grs. to $\frac{1}{2}$ oz.; externally, light brown; longitudinally wrinkled, but no transverse warts; internally, light gray; tough, horny fracture. Some pieces had a high sp. gr., while others floated on water; sp. gr. of the whole, 1.22.

No. 17.—Oblong tubers, compact and plump; weight, 1 to $1\frac{1}{2}$ oz.; sp. gr., 1.16; externally, light to dark brown; scarcely wrinkled longitudinally; covered with transverse warts; internally, nearly white; very starchy fracture.

No. 18.—Oblong pyriform, compact and hard; weight, $\frac{1}{2}$ to 1 oz.; sp. gr., 1.34; externally dark-brown; longitudinally wrinkled; transverse warts; internally, varying from light to dark-gray; fracture resinous.

No. 19.—Irregular, much broken, shrunken and somewhat porous pieces; weight, $\frac{1}{4}$ to 1 oz.; larger tubers sliced longitudinally; very dark-brown externally, with lighter transverse warts; internally, nearly black; very brittle; fracture resinous and conchoidal; sp. gr., 1.17.

All of these five samples produced the characteristic irritating sensation in the nose and throat during pulverization.

RESULTS.

Sample Number.	From City.	Per cent. Total Resin.	Per cent. of Resin dissolved by Ether.	Per cent. Alcohol Extract.	Per cent. of Resin in Extract.
1.....	Columbus.....	5.85	11.57	16.5	35.45
2.....	Kansas City.....	6.16	10.27	16.5	37.32
3.....	Cincinnati	6.62	12.91	17.8	37.18
4.....	Cleveland.....	7.00	15.39	14.2	49.29
5.....	New York ...	7.60	9.65	17.9	42.45
6.....	Indianapolis ...	8.45	11.69	16.8	50.29
7.....	Cleveland.....	8.53	17.83	17.7	48.18
8.....	Cincinnati	8.55	10.52	15.6	54.80
9.....	New York.....	9.23	6.01	22.6	40.83
10.....	Cleveland.....	9.29	13.51	16.5	56.29
11.....	Cincinnati	12.04	15.67	18.7	64.36
12	Cincinnati	13.51	11.59	19.7	68.57
13.....	Columbus.....	14.03	7.02	23.9	58.70
14.....	Cincinnati	14.32	8.68	22.4	63.92
15	Entire.....	7.66	6.21	15.5	49.41
16.....	Entire.....	8.03	9.12	13.9	57.75
17.....	Entire.....	9.21	8.32	11.2	82.22
18.....	Entire.....	12.07	8.21	16.3	74.04
19.....	Entire.....	15.59	5.63	21.9	71.18
	Average.....	9.67	10.51	17.66	45.84
	Standard.....	12.00	10.00	20.00	60.00

U. S. P. M.

CONCLUSION.

The facts brought out by this work show that Jalap entire and powdered, as at present supplied, is variable in quality; a very good and a very poor drug is on the market, the extremes being 5.85 and 15.59 percentage of resin constituent. They also show that the quality of this resin is variable, containing from 5.63 to 17.83 per cent. of Jalapin. Jalap should, therefore, be assayed as well as any drug, the active constituent of which, varies. The process of assay employed by the writer, although believed to be as accurate as any that may be devised, is too tedious for practical purposes. A better and more speedy method is in demand. The percentage of alcohol extract, although larger in good than poor Jalap, does not give an idea of the percentage of resin, and this is not a reliable means of ascertaining the quality of the drug.

The extract itself is variable in quality, and should be assayed for its resin and made to contain 60 per cent. of resin, representing five times its weight of drug of standard quality. It is the writers' opinion that the quality of the extract varies with the stage of growth; when the tuber is young it contains considerable starch, which being insoluble in alcohol, the per cent. of extract is small, but this extract is very rich in resin. At a more advanced stage of growth, when the starch is partially or entirely converted into sugar, which is soluble in alcohol, the tuber yields a larger per cent. of extract, but this is not so rich in resin. When the tuber approaches maturity, the percentage of extract is increased as well as its resin constituent. It is probable that at a certain stage of growth the extract is nearly pure resin. As Jalap owes its virtues to its resin, and as the resin which is soluble in ether is an undesirable constituent, and as Jalap, as well as the resin, is so variable in quality, why is it not advisable to employ only the convolvulin, or the resin which has been treated with ether? This resin is not hygroscopic and the dose is constant, three (3) grains of it representing twenty-five (25) grains of good Jalap.

Nature probably never intended that Jalap should be administered without first changing its character, any more than that man should eat a potato before it is cooked. Nature gives the material, and it is man's, (in this case the pharmacist's,) duty to prepare that material,

not

to remove undesirable constituents and to change the product so as to moderate any unpleasant effect. This is a point which may deserve a little more investigation by the fraternity.

Prof. Lloyd—Mr. President. This paper is of unusual interest. I know that the writer of the paper has been to much trouble and has been very careful in his work, and it calls to our attention the fact that so common a drug as jalap is certainly open to inspection, or should be, as well as cinchona or other drugs of that kind. I was astonished when I went over these figures and reflected upon the differences in jalap. Probably those of us who are acquainted with the crude material are aware of the fact that jalap at the present time is not as large and firm and heavy as it was in former years, that the bulbs are very much smaller than they were, and that with the decrease in the price of jalap there seems to have also been a decrease in the value of the jalap we get, and in the uniformity of it. It is not the same as it was formerly, and those who powder jalap have trouble in getting good jalap to powder. I think that this paper shows us that not only is poor powdered jalap on the market, but also poor crude jalap, and that the low grade of the powdered jalap cannot be altogether due to adulterations. In fact, on the contrary, it is shown, I think, by the averages, that there is nearly as much difference in the crude as there is in the powdered, and possibly it may be that all of this powdered jalap is made of different qualities of real jalap. But I would also call your attention, gentlemen, to the fact that some years ago a spurious jalap appeared on the market and excited considerable comment in this country. I do not know that there is much of it here now. Perhaps Dr. Lyons can enlighten us on that subject.

Dr. Lyons—I am not able to give any information on that point, as to whether that spurious jalap is to be had, as I have not met with it; but it is very certain that much of the crude jalap is far below the Pharmacopœial standard. I am not sure but that the standard is a little high. Pharmacists are obliged to use many preparations of drugs, manufactured they know not how, they know not with what skill; but here is an instance where they find differences or defects in the crude drug itself, and my own experience tallies very well with that of the writer of this paper, that even crude tubers as we meet

them in the market, whether they have been tampered with or otherwise, are frequently as low in resin as from ten to eight per cent.

Prof. Coblenz—A few years ago I had occasion to examine a number of samples of both powdered and crude jalap, and I found as much variation in the crude as in the powdered. Some of the samples of crude jalap were found to have been soaked—that is, they were sticky on the outside, and had all indications of having been soaked in alcohol previous to being thrown on the market, and that may account in some cases for the low amount of resin found. Other samples, that were probably gathered too early, appeared as though worm-eaten; they were spongy in texture. I think you will find that there will be just as much variation in the crude jalap as in the powdered, and in all probability the drug-dealers have been fair and honest in this particular. They have powdered the drug as they bought it on the market, thinking all the time that as it was a true jalap it could be thrown on the market. I think that the drug-dealers are not to blame in the least for this variation.

Prof. Lloyd—Mr. President, I would call the attention of our Association to the fact that probably a considerable amount of impure jalap is thrown on the market now that we did not get in the olden time because the small size of the tubers indicate that it is gathered earlier and that it has not reached its purity. I would suggest that the Committee on Papers and Queries introduce a query as to the variation that exists between large bulbs and small ones, between old and young jalap.

BLACK OXIDE OF MANGANESE.

BY S. W. McKEOWN.

Youngstown O.

QUERY NO. 33.—*Is not much of the Black Oxide of Manganese offered for sale largely adulterated? Test the present market supply for value in pure Binoxide.*

The commercial Black Oxide of Manganese is a mixture of the binoxide of the metal and one or two lower oxides, together with such impurities as silica, alumina, oxide of iron, baryta lime, magnesia, etc. The purest binoxide of manganese found in nature is a mineral called pyrolusite. There are probably at least three oxides found in the commercial article, namely; binoxide (Mn O_2) sesquioxide ($\text{Mn}_2 \text{O}_3$) and protoxide (Mn O).

The first is of nearly a black color, the second is brown, and the third has a greenish hue.

The Pharmacopœia requires that black oxide of manganese shall contain at least 66 per cent. pure binoxide, and that 5 grams shall be sufficient, when boiled with dilute hydrochloric acid, to completely oxidize 21 grams ferrous sulphate, the latter to be added to the cold mixture before boiling. The fact however that 5 grams of the sample *does* oxidize 21 grams ferrous sulphate, does not prove it to contain 66 per cent. of *pure binoxide*, for the reason that the *sesquioxide* also gives up one third of its oxygen, and therefore counts for a certain amount of binoxide. For instance, if the sample under examination contains 60 per cent. only of pure binoxide, and 11 per cent. of sesquioxide it will furnish the required amount of oxygen and be *equivalent* to 66 per cent. of binoxide.

Four samples of black oxide of manganese were subjected to the above test. The amounts of Mn O_2 indicated were 70.00, 69.80, 67.40, and 62.25 per cent. One only fell below the Pharmacopœia standard. A quantitative analysis of each specimen gave the following results:

	1	2	3	4
Binoxide Manganese.....	62 25	70.00	69.80	67.40
Monoxide Manganese.....	6.95	13.41	3.61	6.25
Silicious Water.....	3.24	5.72	8.76	2.35
Oxide Iron, } Alumina, }	3.99	3.24	4.58	3.90
Baryta.....	13.52	1.14	3 66	3.40
Lime.....	.70	1.50	Traces.	3.86
Magnesia.....	.34	.45	Traces.	1.80
Water and Loss.....	9.01	4.54	9 59	11.04
Totals.....	100	100	100	100
Metallic Manganese...	44.74	54.64	46.92	47.44

It is my opinion that little if any of the present market supply is adulterated, although the amount of natural impurities in many instances may be such as to greatly lessen its value.

AMYL NITRITE.

W. SIMONSON,
Cincinnati, Ohio.

QUERY NO. 34.— *Samples of Nitrite of Amyl have been found nearly free from the nitrous radical; what is the percentage of absolute Amyl Nitrite, ($C_5H_{11}NO_2$), in the best specimens of commercial Amyl Nitrite and how near a pure nitrite should a medicinal article approach?*

The Pharmacopœia gives a good description of the properties of this substance, tests for the identity of its parts, and fixes the limit of acidity, but does not name the process by which it should be prepared nor adopt a standard of strength. The objects in answering this query are to show the average percentages of total nitrites, calculated as Amyl Nitrite, in the commercial article, thus determining the limit of strength practicable to adopt, to compare the results obtained by the assaying with those gotten by fractional distillation, and to verify the statement that this substance should be the product of the reaction between nitrous acid gas and well purified amyl alcohol.

ESTIMATION OF AMYL NITRITE.

Whenever this term is used, the statement refers to total nitrites calculated as Amyl Nitrite, $C_5H_{11}NO_2 = 117$. In such a complex mixture as the commercial article, one nitrite, or two or more nitrites, may be, and probably are, present. The method of assay is that of Allen, described in Commercial Organic Analysis, p. 150-151, and detailed fully in the Proceedings of this Association for 1886.

Forty-one packages, from seven makers, were examined by this method for percentage of Amyl Nitrite, and subjected to the official tests. The results of the work are shown in the following table in which the first three are arranged in the order of the supposed quantity used, nothing being known concerning the remainder, except that the seventh, being the production of a foreign maker of the highest reputation, is probably well distributed. If the two samples fairly represented other markets, our supply, from two domestic makers, is unequalled in strength and quality. According to the estimate of the dealers from whom material was obtained, No. 1

supplies from sixty to ninety per cent. of the quantity consumed, yet it is the poorest of all those having a very large sale.

Maker.	Number.	Per cent. Total Nitrites as $C_5H_{11}NO_3$	Sp. Gr. at 15° C. (Water at 15° C = 1.000.	Boiling Point.	Total Acidity as HNO_3	Water (in 25 Gm.)	Color.
A.	1	13.31	.....	.....	.....	.....	Very pale
	2	13.44	.8550	.....	.....	Trace	Yellow.
	3	13.05	.....	.....	.....	.....	.....
	4	20.76	.8541	.....	.....	O. O .....	.....
	5	22.2	.8588	.....	.....	1 to 2 minims.	.....
	6	19.98	.8500	70° C.	.....	Few min. drops..	.....
	7	13.71	.8519	rising	.....	Few min. drops..	.....
	8	23.40	.8548	irregu-	.....	O. O .....	.....
	9	12.00	.8517	larly to	.....	O .....	.....
	10	23.29	.8540	128° C.	.....	Few min. drops..	.....
	11	18.78	.8531	.....	.....	Few min. drops..	.....
	12	14.22	.8552	.....	.....	½ minim.....	.....
	13	17.31	.8531	.....	.....	O .....	.....
	14	14.21	.8454	.....	.57 %	.....	.....
B.	1	84.0	.8778	.....	.....	Few min. drops..	Pale yel.
	2	85.3	.8746	.....	.....	About ¼ minim.	.....
	3	85.0	.8767	.....	.....	} Very few min. drops.....	.....
	4	85.0	.8746	.....	.....	} Very few min. drops...[drops	.....
	5	84.0	.8750	87° C.	.....	} Very few min.	.....
	6	86.9	.8760	Very	.....	.....	.....
	7	84.5	.8780	soon	.....	Few min. drops..	.....
	8	86.5	.8760	constant	.....	Few min. drops..	.....
	9	85.77	.8760	at 96° C.	.....	Few min. drops..	.....
	10	79.43	.8781	.....	.....	Few min. drops..	.....
	11	96.00	.8814	.....	.....	O. O .....	.....
	12	83.11	.8814	.....	.....	Few min. drops..	.....
	13	85.6	.8765	.....	.23%	.....	.....
C.	1	75.36	.8822	.....	.....	Few min. drops..	.....
	2	73.85	.8830	86° C.	.....	About ½ minim..	.....
	3	75.6	.8822	gradual-	.....	About 1 minim..	.....
	4	83.4	.8800	ly rising	.....	Few min. drops..	.....
	5	76.5	.8822	to 96° C.	.....	Few min. drops..	.....
	6	82.70	.8800	then	.....	Few min. drops..	.....
	7	74.21	.8831	constant	.....	About ½ minim..	.....
D.	1	39.0	.8613	.....	.....	Few min. drops..	.....
	2	46.2	.8557	.....	.....	O .....	.....
E.	1	00.0	.8882	.....	.....	Few min. drops..	.....
	2	00.0	1.003	.....	.....	About ½ minim..	.....
F.	1	65.31	.8844	.....	.....	About 2 minims.	.....
G.	1	67.73	.8830	.....	.....	Few min. drops..	.....
	2	66.73	.8830	.....	.....	O. O .....	.....

"SP. GR. .872 TO 874."

The specific gravities given in the table were taken at 15°C, the standard volume being water measured at the same temperature. The specific gravity of pure Amyl Nitrite is given variously, as between .877 and .902, the temperature of the standard volume and that at weighing, being unknown. Of commercial specimens, No. 11 B, nearly pure, had sp. gr. .8814, but the influence of the small diluent is unknown; those of C, next in purity, varied between .8800 and .8831, the higher sp. gr. going with the lower strength; those of C₄ lowest in purity between .856 and .845, lower sp. gr. usually followed by lower strength. No. 1-E, sp. gr. .8882 contained little more than a trace of nitrite. A specimen prepared by this operator for this paper, brought by careful fractional distillation to a constant boiling point and believed to be nearly free from other nitrites and amyl ethers, had sp. gr. 0.88135.

If sp. gr. of amyl alcohol, forming the largest part of the diluent in most specimens, be taken as .818 and that of amyl nitrite as .8814, then sp. gr. .874 would indicate a mixture containing 88 per cent. or less of pure amyl nitrite, and sp. gr. .872 to one containing about 85 per cent. or less. But sp. gr. of nearly all commercial samples can be no indication of strength, since other amyl ethers are present, especially if made by the nitric acid conversion.

"IT BOILS AT ABOUT 96°C."

The statements of the books on the boiling point are more conflicting than those on the specific gravity. The boiling points of the first three brands given in the table were obtained by using 4—5 C.c. contained in a narrow test tube, about 12 c. m. long, fitted with a cork carrying a short delivery tube directed upward, and a correct thermometer, the bulb being just above the surface of the boiling liquid, which was heated by an oil-bath. The boiling point was taken at that temperature at which air had been driven out of the tube, and ether vapor had just begun to escape by the delivery tube.

In taking the boiling point of the commercial nitrite, always of very complex composition, more useful results are obtained by using about 15 C.c. of the sample, the containing tube being of such capacity as to leave the smallest allowable space between liquid and cork. The

presence of fractions boiling much below $96^{\circ}\text{C}.$, unless present in a small and unobjectionable quantity, may then be shown, as these will not have been boiled off before the time of reading the temperature.

The specimen of Amyl Nitrite prepared for this paper was vaporized completely at $96^{\circ}\text{C}.$, the temperature rising slightly and suddenly at the close as the vapor from the last few drops became overheated by the bath.

ACIDITY.

"On shaking 10 C.c. of Nitrite of Amyl with 2 C.c. of a mixture of one part of water of ammonia and nine parts of water, the liquid should not redden blue litmus paper, (limit of free acid,)" corresponding to .63 per cent. HNO_3 . In performing this test the dilute ammonia is best measured into a tube holding little more than the entire mixture, to exclude air, the nitrite then poured in and the tube closed by a cork bearing a small piece of litmus paper. If the paper is blue after shaking, the excess of alkali can be estimated, and, by difference, the acidity calculated. The results by this method are very constant, if not accurate. All samples of A were much above the limit, due to exposure in making other tests, those of B slightly above one-half the limit, and those of C about the same as A. A freshly opened package of A gave .57 per cent. HNO_3 ; B .23 per cent., and C not estimated for lack of material.

ABSENCE OF WATER.

It should remain transparent, or nearly so, when exposed to the temperature of melting ice, (absence of water.) The results shown in the table were obtained by exposing the vials to a bath of ice-water for eight hours and then noting the quantity of water separated. Very few specimens stood this test absolutely, but only in a few cases did it exceed about one-half minim. The test does not prove the absence of water unless the sample is rich in Amyl Nitrite, and contains but a small proportion of amyl alcohol. Thus, No. 8 A yielding no trace of water, when distilled gave over two. per cent. with fractions under $90^{\circ}\text{C}.$ and fully three per cent. below $100^{\circ}\text{C}.$ The presence of water is properly considered to increase decomposition, and, as it appears impossible to separate it, in the presence of amyl alcohol, by cooling to $0^{\circ}\text{C}.$, a well made preparation should contain

but little unaltered alcohol, and a close limit might be placed by increasing the required specific gravity so as to be "from 0.878 to 0.881."

FRACTIONAL DISTILLATION.

Results obtained by the assay process give no indication of the quality of the substance examined, but refer simply to total nitrites. Further knowledge of the composition of the liquid may be obtained by fractional distillation. The apparatus used for this work consisted of a wide-necked distilling flask, holding about 800 C.c.; on which was mounted a five-bulb Henninger tube the delivery of which was connected securely with a small bent tube passing through a bath of ice-water and vertically into the tared receiving flasks, also cooled by ice-water. The fractionating tube was not supplied with cups of gauze, as these could not be obtained in time for the first distillation, and it was necessary to treat all by an uniform process. This defect was compensated as far as possible by very slow distillation, the ratio between distillate and flow-back being about one to twenty, or more, and seldom rising to one to ten. Separations effected under these conditions are very incomplete, and the chief value of the work has been to establish a series of boiling points and note the proportion of distillate obtained between successive temperatures, together with the assay values and specific gravities of the fractions.

This ether is described by some experimenters as having a constant boiling point, and by others as beginning to boil at about 90°C, the temperature passing to 100°C, or beyond. According to Allen, (Com. Org. Analysis, p. 160,) "a fairly pure article will yield fully 80 per cent. of its original measure between 90°C and 100°C, and should leave no very considerable residue at the latter temperature. * * * Incomplete distillation at 100°C is due chiefly to the presence of amyl alcohol, heavy traces of which may apparently be formed by partial decomposition of the nitrite during distillation. Hence, commercial Amyl Nitrite of good quality may leave a residue of 5 to 10 per cent. at 100°C."

425 Gm. of A, 445 Gm. of B and 440 Gm. of C, were fractionated under the described conditions. The data so obtained are set forth in the following tables. In distilling B, the process had to be hastened somewhat and the separation is less perfect than it would have been could more time have been allowed.

TABLE A.

Make A.	Fraction Number.	Temperature.	Per Cent. Weight.	Per Cent. Total Nitrates (as $C_5H_{11}NO_2$)	Specific Grav. (Water at 15° C = 1.000.)	Color.	Physiological Effect.	Color of Vapor
Very pale yellow. Acid.	1	35° C. to 60° C.	3.14	97.75	.891	Full yellow.	Very slight and obtained by repeated inhalations.	Deep orange, soon very pale orange.
	2	60° C. to 75° C.	14.00 (5.0 C.c. Water.)	91.12	.8746	Full yellow.	Much greater than original. Very much less than that of pure Ether.	Very pale orange.
$C_5H_{11}NO_2$	3	75° C. to 90° C.	6.00 (5 C.c. Water.)	21.42	.8580	Full straw yellow.	Same as preceding.	At 75° C. very pale orange. At 90° C. colorless.
	4	90° C. to 100° C.	About 5. (3 C.c. Water.)	0.0	.858	Very light yellow.	None.	Colorless.
Distillate between 90° C. and 100° C. = About 5 per cent. Loss = 4.2 per ct.	5	100° C. to 127° C.	30.3	0.0	.8252	Very faintly yellowish.	None, inducing cough.	Colorless.
	6	128° C. to 132° C.	30.47	0.0	.8187	Colorless.	None, strongly inducing cough.	Colorless.
	7	132° C. to 140° C.	5.10	0.0	.8326	Light orange yellow.	None, scarcely inducing cough.	Colorless.
	8	Above 140° C.	2.50	.....	.....	Opaque nearly black. Thick viscid liquid.	.....	.....

It will be noted that all nitrites distilled or were carried over below 90°C , the following fraction containing but a trace.

The fraction collected between 90°C and 100°C , amounted to less than 5 per cent. The exact amount is unknown because the fractionating tube broke at 93°C , involving a slight loss by escape of vapor, and a greater loss by transferring. But the fraction had not the characteristic effect on the head, and its vapor was quite colorless.

TABLE B.

MAKE B.	Fraction Number.	Temperature.	Per Cent. Weight.	Per Cent. Total Nitrites (as $C_6H_{11}NO_3$)	Specific Grav. (Water at 15° C = 1.000.)	Color.	PHYSIOLOGICAL EFFECT.	Color of Vapor.
Pale yellow, slightly acid. Sp. gr. .8780, assay = 84.5 per ct. $C_6H_{11}NO_3$ Distillate between 90° C. and 100° C. = 80.1 per cent. Loss = 1.1 per ct.	1	70° C. to 90° C.	5.75	103.45	.8877	Full straw, deeper than original.	Obtained slowly and far less than that of pure Ether.	Deep orange, soon very pale orange.
	2	90° C. to 92° C.	7.15	99.50	.8830	Full straw yellow.	Obtained slowly, about half that of pure Ether.	Very pale orange.
	3	92° C. to 94° C.	13.06	96.66	.8805	Pale yellow.	Nearly that of pure Amyl Nitrite.	Very pale orange.
	4	94° C. to 95° C.	32.0	95.00	.8787	Pale yellow.	Very nearly that of pure Amyl Nitrite.	Very pale orange.
	5	95.5° C. to 97.5° C.	25.6	90.65	.877	Pale yellow.	Scarcely differing from preceding.	Very pale orange.
	6	97.5° C. to 100° C.	2.82	78.71	.8750	Pale yellow.	Much less, about two-thirds that of pure Ether.	Very pale orange.
	7	100° C. to 129° C.	3.67	15.00	.....	Very pale straw yellow.	Very feeble, obtained slowly, strongly inducing cough.	Scarcely colored.
	8	129° C. to 132° C.	5.3	0.0	.8291	Full yellowish brown.	None, very slightly inducing cough.	Colorless.
	9	Above 132° C. Residue.	4.2	.....	.....	Deep red-black. Thin liquid.	.....	.....

This specimen gave less than 6 per cent. distillate below 90°C, fully 80 per cent. between 90° and 100°C, leaving at this temperature less than 15 per cent. of residue, and this, consisting in small part, of Amyl Nitrite, might have been reduced by slower distillation. The principal part of this residue appears to have been amyl alcohol.

TABLE C.

MAKE C.	Fraction Number.	Temperature.	Per Cent. Weight.	Per Cent. Total Nitrites (as $C_6H_{11}NO_2$)	Specific Grav. ($C=1,000$) (Water at 15°)	Color.	PHYSIOLOGICAL EFFECT.	Color of Vapor.
Full yellow, much deeper than pure Amyl Nitrite. Acid. Sp. gr. .8800. assay=.83 35 per ct. $C_6H_{11}NO_2$ Distillate between 90° C. and 100° C. = 75.1 per cent. Loss=.0.9 per ct.	1	60° C. to 90° C.	8.36	94.66	.8822	Full yellow.	About one-fourth that of Amyl Nitrite and differing in kind.	Full orange, soon very pale orange.
	2	90° C. to 92° C.	15.22	93.12	.8815	Full yellow.	Half, also differing in kind.	Very pale orange.
	3	92° C. to 94° C.	10.8	91.35	.8810	Yellow.	Same as preceding but more lasting.	Very pale orange.
	4	94° C. to 97° C.	32.24	91.07	.8805	Pale yellow.	Little weaker than Amyl Nitrite and but slightly differing.	Very pale orange.
	5	97° C. to 100° C.	16.83	88.06	.8805	Pale yellow.	About same as preceding.	Very pale orange.
	6	100° C. to 110° C.	2.94	58.36	.8795	Very pale yellow.	About two-thirds that of pure Ether.	Very pale at 110° C. colorless.
	7	110° C. to 124° C.	4.74	0.0	.8750	Nearly colorless.	None.	Colorless.
	8	127° C. to 132° C.	4.80	0.0	.8674	Brownish yellow.	None.	Colorless.
	9	Above 132° C. Residue.	3.17	0.0	.....	Opaque. Reddish black.	None.	.....

This specimen is known to have been prepared by the nitric acid conversion.

The high sp. gr. of all these fractions proves the absence of much amyl alcohol.

Fraction 4, 94°C to 97°C, having greatest physiological effect, assayed but 91.1 per cent., the diluent in great part valeric aldehyde. The presence of this substance shows the greatest defect of the nitric acid process, and the great difficulty or impossibility of making a pure article by this means.

The results may be compared as follows :

MAKE.	Distillate below 90° C.	90° C. to 100° C.	Above 100° C.	Total.	Loss.
A	23.2	About 5.0	67.6	95.8	4.2
B	5.75	80.1	13.05	98.9	1.1
C	8.35	71.1	15.65	99.1	9

These results show that of two domestic brands of Amyl Nitrite of fairly good quality, one is made from very well purified amyl alcohol, or is carefully fractioned from the crude nitrite, and the second from a moderately well purified alcohol, or is but imperfectly fractioned from the first-found nitrite. But one brand, and that is certainly the one most largely sold, is evidently made from a very impure amyl alcohol, and is also put on the market unrectified. The mixture is scarcely fit for medicinal use, and this may account in part for the neglect into which the article has fallen.

Respecting the preparation of this body, authors usually quoted are at variance and are contradictory, but the weight of authority is in favor of some form of the nitrous acid method, and, more recently, Williams and Smith have shown the necessary details for obtaining the largest yield and the purest product. (Pharm. Jour. and Trans., Dec.

12, 1885; *Am. Jour. Pharm.*, Jan., 1886.) They recommend acting on purified amyl alcohol with the gas given off by reaction between arsenious oxide and nitric acid of sp. gr. 1.350 to 1.360, the alcohol being kept cool throughout the process. By this method was prepared a quantity of crude Amyl Nitrite. The retort is partly filled with arsenious oxide in coarse powder which is covered with diluted nitric acid containing 54 per cent. of absolute nitric acid. The mixture is gently heated and the evolved gas, not warmer than 30°C as it leaves the retort, passes into a large empty bottle, becoming further cooled and depositing a small quantity of liquid carried over from the retort. The tall, narrow cylinder is not more than three-fourths filled with amyl alcohol, and the heat is so regulated as to keep a slow stream of bubbles passing through it.

Much difficulty was found in getting an alcohol suited for preparing the nitrite. Most of that met with appeared like tailings of the rectification of fusel oil. The best commercial specimen obtainable had sp. gr. .8181, and boiling point, (taken on too small a quantity,) 125°C to 132°C. Appearing to be well rectified it was used without further purification, but afterward proved to have been very impure. 18¾ ozs. of this alcohol, nitrified by the process described, yielded 24 ozs. or 96 per cent. of the theoretical yield. After regulating the heat, the process went on with only occasional inspection and this to stop the work on appearance of the olive-green color, which indicates complete conversion. This product assayed 103.7 per cent. Amyl Nitrite, and after washing with two volumes of 20 per cent. solution of sodium carbonate, gave, in two assays, 102.2 and 101.9 per cent. Rectified in an ordinary retort fitted with a good thermometer and well connected with a Liebig condenser, 11 per cent. came over under 90°C, 75 per cent. between 90°C and 97°C, leaving a residue of 1.2 per cent. with a loss of 2.8 per cent.

Fraction under 90°C had sp. gr. .8869, and assayed 107.5 per cent. Amyl Nitrite; washed with sodium carbonate solution and cooled to 0°C to separate water, it had sp. gr. .8843 and assayed 107.6 per cent. Amyl Nitrite.

The small residue remaining at 97°C, 1.2 per cent., assayed 1.91 per cent. Amyl Nitrite, but sp. gr. could not be taken with any useful accuracy. The 90°C-97°C fraction, washed with sodium carbonate:

solution and cooled to 0°C for 12 hours, separated from about 500 Gm. of ether about 2 C.c. of water. It then had a pale yellow color, was free from nitrous odor, had sp. gr. .8818, and assayed 101.12 per cent. Amyl Nitrite. Both assay value and sp. gr. showing the presence of nitrites of lower molecular weight, perhaps of lower alcohols. A quantity of the ether was next examined by fractional distillation, using 414 Gm. Results appear in the following table:

TABLE NO. 1.

Product of Nitrous Acid.	Fraction Number.	Temperature.	Per Cent. Weight.	Per Cent. Total Nitrites (as $C_6H_{11}NO_2$)	Specific Grav. (Water at 15° C. = 1.000.)	Color.	Physiological Effect.	Color of Vapor.
Conversion.	1	80° C. to 90° C.	11.11	.....	.....	.....	.....	Deep orange, soon pale orange.
Process of Williams & Smith.	2	90° C. to 92° C.	8.37	102.66	.8830	Pale yellow.	Obtained slowly, and about one-third that of pure Ether.	Very pale orange.
Pale yellow, neutral.	3	92° C. to 94° C.	8.77	100.31	.8830	Pale yellow.	About half that of pure Ether.	Very pale orange.
Sp. gr. .8818. assay = 101.12 per cent.	4	94° C. to 95.5° C.	20.92	100.14	.8828	Pale yellow.	Obtained quickly, but much less than that of Amyl Nitrite.	Very pale orange.
$C_6H_{11}NO_2$	5	95.5° C. to 96° C.	45.00	100.0	.88135	Pale yellow.	Not differing from that of pure Ether.	Very pale orange.
Distillate between 90° C. and 100° C. =	6	96° C. to 97° C.	1.36	93.8	.....	Pale yellow.	Obtained more slowly than from 5, but differing in kind.	Very pale orange.
84.42 per cent. Loss = 2 per cent.	7	Above 97° C.	2.46	59.8	.....	Slight brownish, about twice original.	Obtained still more slowly, not differing in kind.	.....

Fraction one was lost at once by breakage, hence its properties could not be determined, but in the following ones sp. gr. remained nearly constant until No. 5 gave .88135. The assay values fell gradually until 5 gave as near 100 per cent. as the method will indicate.

The results of this experiment show that the product of the manufacturing process consisted of but little other than nitrites, the impurity being in very small proportion. As they also showed the probable presence of nitrites of lower alcohols, the remainder of supply of amyl alcohol was examined by distillation, and as was expected, the liquid proved to be very complex. Eight per cent. passed between 90°C and 105°, sp. gr. .857; 32.5 between 113°C and 127°C, sp. gr. .8134; and 52 between 127°C and 129°C, sp. gr. .8154, leaving a residue of 7.3, sp. gr. .8170, which probably would have distilled under 133°C.

It would thus appear that pure amyl alcohol of constant boiling point will yield a nearly pure Amyl Nitrite, also of constant boiling point, and that that temperature is 96°C, the sp. gr. being about .8813—.8814.

Owing to lack of material to prove this supposition, the subject is left for the present and may form a note for the next meeting.

In view of the facts shown in the foregoing paragraphs, it would seem that the Pharmacopœia recognizes an Amyl Nitrite far from pure, and much less pure than one domestic brand, and still less pure than the specimen prepared for the purposes of this paper. "When freely exposed to the air, it leaves a large residue of amyl Alcohol," does not apply to either, the former leaving but a small residue at end of five hours, and the latter scarcely more than an oily film when 10° C.c. of each was exposed in watch-glasses. Specific gravity is much too low, allowing a large admixture of amyl alcohol, and vapor is never more than transiently orange-colored from a good article, very soon becoming very pale orange or nearly colorless, unless seen in depth of about one metre. The limit of acidity is far above the commercial specimen just referred to, and still farther above what is easily possible. Considering the great ease with which the substance can be prepared by the method detailed, excluding amyl alcohol entirely, including other ethers only in traces, and

having for greatest impurity certain nitrogen oxides almost entirely removed by process of purification—from these it would appear advisable to include a quantitative test that should require a nearly absolute ether, to lower the limit of acidity very much, and raise sp. gr. to be 0.878 to 0.881." These tests, with a closer definition of method of taking the boiling point, would describe and require a much better article, and these requirements could easily be met by manufacturers of the commercial ether.

ACT OF INCORPORATION.

The undersigned, residents of the State of Ohio, Sylvester S. West, Lewis C. Hopp, George H. Fenner, Nathan Rosenwasser, A. Mayell and William F. Spieth, do hereby certify that we desire to form a corporation and become incorporated under and pursuant to the laws of the State of Ohio, and especially as provided and prescribed in Sections 3235 and 3236, and the following Sections of Title 2, Chapter 1, of the Revised Statutes of Ohio, which took effect January 1, 1880.

ARTICLE 1. The name by which we desire to be known is THE OHIO STATE PHARMACEUTICAL ASSOCIATION.

ART. 2. Said Association to meet annually, at such place as may be designated at a previous meeting, and on the third Wednesday in May of each year, at which time the business of the Association will be transacted. (See Article 4 of the Constitution.)

ART. 3. The object of the Association shall be to unite the reputable pharmacists and druggists of the State, to improve the science and art of pharmacy, to elevate its standard, and to eventually restrict the practice of pharmacy to properly qualified pharmacists and druggists.

SYLVESTER S. WEST,	[SEAL.]
LEWIS C. HOPP,	[SEAL.]
GEORGE H. FENNER,	[SEAL.]
NATHAN ROSENWASSER,	[SEAL.]
ALFRED MAYELL,	[SEAL.]
WILLIAM F. SPIETH.	[SEAL.]

STATE OF OHIO, } ss.
CUYAHOGA COUNTY,

Before me, a Notary Public, duly commissioned and sworn, within and for the County of Cuyahoga, and State of Ohio, personally appeared the above named Sylvester S. West, Lewis C. Hopp, George H. Fenner, Nathan Rosenwasser, A. Mayell and William F. Spieth, corporators of The Ohio State Pharmaceutical Association, and acknowledged that they did sign and seal the above certificate, and that the same is their free act and deed.

In Witness Whereof, I have hereunto set my hand and affixed my Notarial Seal, at Cleveland, Ohio, this 26th day of April, A.D., 1880.

[L. s.]

L. A. WILLSON, *Notary Public*.

STATE OF OHIO, } ss.
CUYAHOGA COUNTY,

I, Wilbur F. Hinman, Clerk of the Court of Common Pleas, a Court of Record of Cuyahoga County, aforesaid, do hereby certify that L. A. Wilson, before whom the annexed acknowledgement was taken, was, at the date thereof, a Notary Public in and for said County, duly authorized by the laws of Ohio to take the same, and that I am well acquainted with the handwriting, and believe his signature thereto is genuine.

In Testimony Whereof, I hereunto subscribe my name and affix the seal of said Court, at Cleveland, this 28th day of April, A.D., 1880.

[L. s.]

WILBUR F. HINMAN, *Clerk*.

CONSTITUTION.

ARTICLE I.

This Association shall be called "THE OHIO STATE PHARMACEUTICAL ASSOCIATION."

ARTICLE II.

The object of this Association shall be to unite the reputable pharmacists and druggists of this State, to improve the science and art of pharmacy, to elevate its standard, and to restrict the practice of pharmacy to properly qualified pharmacists and druggists.

ARTICLE III.

Every pharmacist and druggist of good moral and professional standing, and of legal age, whether in business on his or her account, retired from business, or employed by another, and teachers of pharmacy, materia medica, chemistry and botany, who may be especially interested in pharmacy, shall be eligible to membership.

ARTICLE IV.

This Association shall meet annually at such time and place as shall be previously determined.

ARTICLE V.

The officers of this Association shall be a president, two vice presidents, a permanent secretary, assistant secretary, a permanent treasurer, and an executive committee of three, all of whom, except the permanent secretary and treasurer, shall be elected annually by ballot, and serve until their successors are duly elected.

ARTICLE VI.

Every proposition to alter or amend this Constitution shall be in writing, and shall be acted upon at the next annual meeting; when, upon receiving the vote of three-fourths of the members present, it shall become a part of the Constitution.

BY-LAWS

CHAPTER I.

DUTIES OF OFFICERS.

ARTICLE 1. The president shall preside at all meetings of the Association. In his absence or inability to preside, one of the vice presidents, or in the absence of all, a president *pro tempore* shall perform the duties of the president. In all ballottings, and upon all questions upon which the ayes and naves are taken, the president is required to vote; in other cases he shall not vote unless the members be equally divided. He shall call a special meeting, whenever requested by twenty-five members, and present at each annual meeting a report of the operations of the Association.

ARTICLE 2. The secretary shall keep a record of the proceedings of the Association, a list of the names, residences, and date of entrance of each member, and be the custodian of all papers read; he shall conduct all correspondence of the Association, and notify each member of the meetings. He shall also publish and distribute the annual proceedings of the Association, having previously obtained the consent of the executive committee to the necessary expenditure of money.

ARTICLE 3. The treasurer shall have charge of all the funds of the Association, for which he shall be personally responsible; collect all moneys due the Association; pay all bills when countersigned by the president; issue certificates of membership; render a full report of each annual meeting, and report the state of the treasury when called upon by the executive committee.

ARTICLE 4. The executive committee shall take into consideration, and report without delay, on all matters of business, and on all propositions for membership, and audit all bills against the Association.

CHAPTER II.

MEMBERSHIP.

ARTICLE 1. Propositions for membership shall be made to the executive committee, in writing, with the indorsement of two members of the Association in good standing; and the vote of two-thirds of the members present at any session shall be required for election.

ARTICLE 2. No person shall be considered a member of this Association until he has signed the Constitution and By-Laws, and paid an initiation fee of two dollars and the annual contribution for the current year.

ARTICLE 3. Every member shall pay in advance to the treasurer one dollar as his yearly contribution, and shall forfeit his membership by neglecting to pay said contribution for three successive years.

ARTICLE 4. Resignations of membership shall be made in writing to the secretary; but no resignations shall be accepted from any one who is in arrears to the treasury, nor until he has surrendered his certificate of membership.

ARTICLE 5. The Association shall have power to expel a member by a two-third vote; but the vote shall not be taken until the next annual meeting after the charges have been preferred, and the accused shall be notified of the charges and specifications made against him.

ARTICLE 6. Pharmacists, chemists, and other scientific men who may be thought worthy of the distinction, may be elected honorary members. They shall not, however, be required to contribute to the funds, nor shall they be eligible to hold office or vote at the meetings.

ARTICLE 7. Pharmacists, chemists, and other scientific men who are, or have been, active members of this Association, and have removed from the State of Ohio, may be elected to associated membership. They shall not be required to contribute to the funds of the Association, nor shall they be eligible to hold office or vote at the meetings.

ARTICLE 8. Active members of this Association in good standing for at least five years, may have issued to them by the secretary a certificate of life membership, upon the payment of ten dollars into the treasury of the Association.

CHAPTER III.

MEETINGS.

ARTICLE 1. Fifteen members shall constitute a quorum for the transaction of business.

ARTICLE 2. The order of business shall be as follows:

- | | |
|-------------------------|----------------------------|
| 1. Calling roll. | 5. Election of officers. |
| 2. Reading minutes. | 6. Reading communications. |
| 3. Election of members. | 7. Reports of committees. |
| 4. Report of officers. | 8. Miscellaneous business. |

CHAPTER IV.

RULES OF ORDER.

ARTICLE 1. The ordinary rules of parliamentary bodies shall be enforced by the presiding officer; from whose decision, however, appeals may be taken, if required by two members, and the meeting shall thereupon decide without debate.

ARTICLE 2. When a question is regularly before the meeting, and is under discussion, no motion shall be received but to adjourn, to lay on the table, for the previous question, to postpone to a certain day, to commit or amend, to postpone indefinitely—which several motions have precedence in the order in which they are arranged. A motion to adjourn shall be decided without debate.

ARTICLE 3. No member shall speak twice on the same subject, except by permission, until every member wishing to speak has spoken.

ARTICLE 4. On the call of any two members, the yeas and nays shall be ordered, when every member shall vote, unless excused by a majority of those present, and the names and manner of voting shall be entered on the minutes.

CHAPTER V.

COMMITTEES.

ARTICLE 1. The president shall appoint the following committees, viz.:

A committee of three members on matters of trade interests.

A committee of three members on papers and queries.

A committee of five members on pharmacy laws.

A committee of five members upon national formulæ.

A committee of one member for each county on State and county correspondence.

A committee of three members on adulteration and sophistication.

ARTICLE 2. Five delegates and five alternates shall be annually elected to attend the meetings of the American Pharmaceutical Association.

ARTICLE 3. The president shall, at the first session of the regular meetings, appoint a committee of nine to nominate officers for the Association, who shall report at the next session.

CHAPTER VI.

MISCELLANEOUS.

ARTICLE 1. Every proposition to alter or amend these By-Laws shall be submitted in writing, and may be balloted for at any subsequent session; when, upon receiving a vote of two-thirds of the members present, it shall become a part of the By-Laws.

ARTICLE 2. No one, or more, of these By-Laws shall be suspended.

OHIO PHARMACY LAW.

[Senate Bill No. 6.]

AN ACT

To amend Sections 4405, 4406, 4407, 4408, 4409, 4410, 4411, and 4412
of the Revised Statutes of Ohio.

SECTION 1. *Be it enacted by the General Assembly of the State of Ohio,* That sections forty-four hundred and five, forty-four hundred and six, forty-four hundred and seven, forty-four hundred and eight, forty-four hundred and nine, forty-four hundred and ten, forty-four hundred and eleven, [and] forty-four hundred and twelve of the revised statutes of Ohio, be so amended as to read as follows:

Who must employ a registered pharmacist.

SECTION 4405. It shall be unlawful for any person not a registered pharmacist to open or conduct any pharmacy or any retail drug or chemical store as proprietor thereof, unless he shall have in his employ and place in charge of such pharmacy, or store, a registered pharmacist within the meaning of this chapter, who shall have the supervision and management of that part of the business requiring pharmaceutical skill and knowledge; or to engage in the occupation of compounding or dispensing medicines on prescriptions of physicians, or of selling at retail for medicinal purposes, any drugs, chemicals, poisons, or pharmaceutical preparations within this State until he has complied with the provisions of this chapter; provided, nothing in this section shall apply to, or in any manner interfere with, the business of any physician, or prevent him supplying to his patients such articles as may seem to him proper, or to the making or vending of patent or proprietary medicines by any retail dealer, or with the selling by any country store of copperas, borax, blue vitriol, saltpetre, sulphur, brimstone, licorice, sage, juniper berries, senna leaves, castor oil, sweet oil, spirit of turpentine, glycerine, Glauber salt, epsom salt, cream of tartar, bi-carbonate of sodium; and of paregoric, essence of peppermint, essence of cinnamon, essence of ginger, hive syrup, syrup of ipecac, tincture of arnica, syrup of tolu, syrup of squills, spirit of camphor, number six, sweet spirit of nitre, compound cathartic pills, quinine pills, and other similar preparations when compounded by a regular pharmacist, and put up in bottles and boxes bearing the label of such pharmacist or wholesale druggist, with the name of the article and directions for its use on each bottle or box, or with the exclusively wholesale business of any dealer.

Who may retail drugs.

Proviso.

Appointment of the Ohio Board of Pharmacy.

SECTION 4406. The Ohio State Pharmaceutical Association shall, immediately upon the passage of this act, submit to the governor the names of ten persons residents of this State, who have had at least ten years' exper-

ience as pharmacists and druggists, and from the names so submitted to him or others the governor shall, with the approval of the Senate, select and appoint five persons, who shall constitute a board, to be styled the Ohio Board of Pharmacy; one member of said board shall be appointed, and hold his office for one year; one for two years, one for three years, one for four years, and one for five years, and until his successor shall be appointed and qualified; and at its regular annual meeting in each and every meeting thereafter, the said Ohio State Pharmaceutical Association shall select and submit to the governor the names of five persons, with the qualification hereinbefore mentioned, and the governor shall, with the approval of the Senate, select and appoint from the names so submitted, or others, one member of said board, who shall hold his office for five years, until his successor shall be appointed and qualified. Any vacancy that may occur in said board shall be filled for the unexpired term by the governor, with the approval of the Senate. Each member of said board shall, within ten days after his appointment, take and subscribe an oath of affirmation, before a competent officer, to faithfully and impartially perform the duties of his office.

Vacancy in the Board, how filled.

SECTION 4407. The Ohio Board of Pharmacy shall hold three regular meetings in each year; one at Cincinnati on the second Monday of January, one at Columbus on the second Monday of May, and one at Cleveland on the second Monday of October, and such additional meetings, at such times and places as may be determined upon by said board, at each of which meetings it shall transact such business as is required of it by law; said board shall make such rules, by-laws and regulations as may be necessary for the proper discharge of their duties, and shall make a report of its proceedings, including an itemized account of all moneys received and expended by said board, pursuant to this chapter, and a list of all pharmacists duly registered under this act, to the secretary of state on the 15th day of November, 1884, and annually thereafter, and to the Ohio State Pharmaceutical Association. Said board shall keep a book of registration open at some place in Columbus, of which due notice shall be given in three or more newspapers of general circulation in this State, in which the name and place of business of every person duly qualified under this chapter to conduct, or engage in the business mentioned and described in section forty-four hundred and five, shall be registered. Every person now conducting or engaged in such business in this State as proprietor or manager of the same, or who, being of the age of eighteen years, has been employed or engaged for three years preceeding the passage of this act as an assistant in any retail drug store in the United States, in the compounding or dispensing of medicines on the prescriptions of physicians, who shall furnish satisfactory evidence in writing and under oath of such facts, within three months after the publication of said notice, shall be registered as a pharmacist, or assistant pharmacist, as the case may be, without examination. Every person who shall desire hereafter to conduct, or engage in such business in this State, shall appear before said board, and be registered within ten days after

Sessions of the Board, when and where held.

Duties of Board.

Book of Registration to be kept.

Fee for registration.

receiving a certificate of competency and qualification from said board. The said board shall demand and receive for such registration from each and every person registered as a pharmacist, a fee of not exceeding three dollars, and from each and every person registered as an assistant pharmacist, a fee not exceeding two dollars, to be applied to the payment of the expenses arising under the provisions of this chapter. Provided, however, that no such fee shall be demanded of any person who has heretofore been registered as the proprietor or manager of such business or as an assistant therein, under the provisions of any law heretofore in force in this State. Every registered pharmacist, or assistant pharmacist, who desires to continue the practice of his profession, shall, triennially thereafter, during the time he shall continue in such practice, on such date as said board may determine, pay to the secretary of said board a registration fee, to be fixed by said board, but which shall in no case exceed, if a pharmacist, one dollar; if assistant pharmacist, fifty cents, for which he shall receive a renewal of said registration. Every certificate of registration granted under this act shall be conspicuously exposed in the prescription department of the drug or chemical store to which it applies, or in which the assistant is engaged. The secretary of said board shall receive a salary which shall be fixed by said board; he shall also receive his travelling and other expenses incurred in the performance of his official duties. The other members of said board shall receive the sum of three dollars for each day actually engaged in the service thereof, and all legitimate and necessary expenses incurred in attending the meetings of said board. Said salary per diem, and expenses shall be paid after an itemized statement of the same has been rendered and approved by the board, from the fees and penalties received by said board under the provisions of this act. All moneys received in excess of said per diem allowance, and other expenses above provided for, shall be held by the secretary as a special fund for meeting the expenses of said board; he giving such bond as said board shall from time to time direct.

Fee for renewal
of registration.

Salary of Secretary & Board.

Excess of fees,
how disposed of.

Duties of Board
with respect
to examinations.

SECTION 4408. The Ohio Board of Pharmacy shall examine every person who desires to carry on or engage in the business of a retail apothecary, or of retailing any drugs, medicines, chemicals, poisons, or pharmaceutical preparations, or of compounding or dispensing the prescriptions of physicians, as proprietor and manager, touching his competency and qualification for that purpose, and upon a majority of the board being satisfied of such competency and qualification, they shall furnish such person a certificate of his competency and qualification, as pharmacist, which certificate shall entitle the person named therein to conduct and carry on the business aforesaid, as proprietor and manager thereof, upon complying with the requirements of section forty-four hundred and seven; and such board shall also examine each person who desires to engage in such business as assistant pharmacist, touching his competency and qualification, and upon such person passing a satisfactory examination, setting forth that he is a qualified assistant in pharmacy,

which certificate shall enable the person named therein to engage in said business as an assistant pharmacist, upon his complying with the provisions of section forty-four hundred and seven.

SECTION 4409. The provisions of [section] forty-four hundred and eight shall not apply to any person engaged in the retail drug and apothecary business, as proprietor or manager of the same, at the time of the passage of this act, or who, being at the age of eighteen years, has been continuously employed or engaged for three years immediately preceeding the passage of this act, as assistant in any retail drug store in the United States, in the compounding or dispensing of medicines on the prescriptions of physicians, who has complied with the provisions of section forty-four hundred and seven. To whom preceding provisions do not apply.

SECTION 4410 (as amended March 20th, 1884.) No person not a qualified assistant, shall be allowed by the proprietor or manager of any retail drug or chemical store, to compound or dispense the prescriptions of physicians, except as an aid under the supervision of a registered pharmacist, or his qualified assistant. Assistant Pharmacist to be qualified.

SECTION 4411 (as amended March 29th, 1884.) A qualified assistant, within the meaning of this chapter, shall be a clerk or assistant in a retail drug or chemical store, who shall furnish to the Ohio Board of Pharmacy such evidence of his employment as is required by section forty-four hundred and seven; or a person holding the certificate of said board, as an assistant pharmacist, as provided in section forty-four hundred and eight; but it shall be unlawful for such assistant pharmacist, or qualified assistant, to supervise or manage any pharmacy or retail drug or chemical store, or to engage in the occupation of compounding or dispensing medicines on prescriptions of physicians, or of selling at retail for medicinal purposes, any drugs, chemicals, poisons, or pharmaceutical preparations, except when engaged or employed in a pharmacy, retail drug or chemical store, which is in charge of and is under the supervision and management of a registered pharmacist. Qualifications of assistant pharmacists.

SECTION 4412 (as amended March 20th, 1884.) Any person owning a pharmacy, retail drug or chemical store, who, in violation of the provisions of section 4405 of this act, causes or permits the same to be conducted or managed by a person not a registered pharmacist, shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be fined in any sum not less than twenty dollars, nor more than one hundred dollars, and each week that he shall cause or permit such pharmacy, retail drug or chemical store to be so conducted or managed shall constitute a separate and distinct offence, and render him liable to separate prosecution and punishment therefor; a person violating the provisions of section forty-four hundred and seven, relating to registration, renewal of registration, or failing to conspicuously expose such certificate of registration, shall be deemed guilty of a misdemeanor, and upon Penalties for violating section 4405.

Penalties for violating section 4407.

- Penalties for violating section 4410. conviction thereof shall be fined in any sum not exceeding one hundred dollars for each week he continues to carry on or to be engaged in such business without such registration or such exposure of such certificate of registration, or renewal thereof. And for the violation of any of the provisions of section 4410, such proprietor or manager shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be fined in any sum not exceeding fifty dollars for each and every offense; and for the violation of any of the provisions of 4411, such assistant pharmacist shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be fined in any sum not exceeding fifty dollars for each and every offense. All fines assessed for the violation of any of the provisions of this act shall be placed in the county treasury, for the use and benefit of the common school fund of the county in which such offense is committed; provided that nothing in this act shall be construed as to in any way affect the right of any person to bring a civil action against any person referred to in this act, for any act or acts for which a civil action may now be brought. It shall be the duty of the Ohio Board of Pharmacy, upon application therefor being made to said board, to cause the prosecution of any person or persons violating any of the provisions of this act.
- Penalties for violating section 4411.
- Duty of the Board of Pharmacy upon application to cause prosecution.

ADULTERATION LAW.

[Hous. Bill No. 18.]

AN ACT

To provide against the adulteration of food and drugs.

SECTION 1. *Be it enacted by the General Assembly of the State of Ohio,* That no person shall, within this State manufacture for sale, offer for sale, or sell any drug or article of food which is adulterated, within the meaning of this act.

Term drug defined. SEC. 2. The term "drug" as used in this act, shall include all medicines for internal or external use, antiseptics, disinfectants and cosmetics. The term "food" as used herein, shall include all articles used for food or drink by man, whether simple, mixed or compound.

SEC. 3. An article shall be deemed to be adulterated within the meaning of this act:

When drugs are deemed adulterated. (a) In the case of drugs: (1) If, when sold under or by a name recognized in the United States Pharmacopoeia, it differs from the standard of strength, quality or purity laid down therein; (2) If, when sold under or by a name not recognized in the United States Pharmacopoeia but which is found in some other pharmacopoeia, or other standard work on materia medica, it differs materially from the standard of strength, quality or purity laid down in such work; (3) If its strength, quality or purity falls below the professed standard under which it is sold.

(b) In the case of food: (1) If any substance or substances have been mixed with it, so as to lower or depreciate, or injuriously affect its quality, strength or purity; (2) If any inferior or cheaper substance or substances have been substituted wholly or in part for it; (3) If any valuable or necessary constituent or ingredient has been wholly or in part abstracted from it; (4) If it is an imitation of, or is sold under the name of another article; (5) If it consists wholly or in part, of a diseased, decomposed, putrid, infected, tainted or rotten animal or vegetable substance or article, whether manufactured or not—or, in case of milk, if it is the produce of a diseased animal; (6) If it is colored, coated, polished or powdered, whereby damage or inferiority is concealed, or if by any means it is made to appear better or of greater value than it really is; (7) If it contains any added substance or ingredient which is poisonous or injurious to health, or any deleterious substance not a necessary ingredient in its manufacture; provided that the provisions of this act shall not apply to mixtures or compounds recognized as ordinary articles of food, if the same be distinctly labeled as mixtures or compounds, and are not injurious to health, and contain no ingredient not necessary to the preparation of a genuine article of such mixtures or compounds, and from which no necessary ingredient in its preparation is eliminated.

When food deemed adulterated.

SEC. 4. Every person manufacturing, offering or exposing for sale or delivering to a purchaser, any drug or article of food included in the provisions of this act, shall furnish to any person interested or demanding the same, who shall apply to him for the purpose, and shall tender him the value of the same, a sample sufficient for the analysis of any such drug or article of food which is in his possession.

Sample may be demanded for analysis.

SEC. 5. Whoever refuses to comply, upon demand, with the requirements of section four, and whoever violates any of the provisions of this act, shall be guilty of a misdemeanor, and upon conviction shall be fined not exceeding one hundred nor less than twenty-five dollars, or imprisoned not exceeding one hundred nor less than thirty days, or both. And any person found guilty of manufacturing, offering for sale or selling an adulterated article of food or drug under the provisions of this act, shall be adjudged to pay, in addition to the penalties hereinbefore provided for, all necessary costs and expenses incurred in inspecting and analyzing such adulterated articles of which said person may have been found guilty of manufacturing, selling or offering for sale.

Penalties.

SEC. 6. This act shall take effect and be in force in forty days from and after its passage.

A. D. MARSH,
Speaker of the House of Representatives.
 ELMER WHITE,
President pro tem. of the Senate.

Passed March 20, 1884.

POISON LAW.

Sec. 6957 Revised Statutes of Ohio.

Whoever sells, or gives away, any quantity of arsenic less than one pound, without first mixing therewith soot or indigo in the proportion of one ounce of soot or half an ounce of indigo to the pound of arsenic, or, except upon the prescription of a physician, sells or gives away, any quantity of any article belonging to the class usually denominated poisons, to any minor, or sells, or gives away, any such article to any person, without having first marked the word "poison" upon the label or wrapper containing the same, and registered in a book to be by him kept for that purpose, the day and date upon which it is sold or given away, the quantity thereof, the name, age, sex, and color of person obtaining the same, the purpose for which it is required, and the name and place of abode of the person for whom the same is intended, shall be fined not more than two hundred nor less than twenty dollars. [50 V. 167, §§ 1, 2, 3, 4.]

MORPINE LAW.

[House Bill No. 66.]

To prescribe the manner of selling the sulphate and other preparations of morphine in the State and for other purposes.

SECTION 1. *Be it enacted by the General Assembly of the State of Ohio,* That it shall not be lawful for any person, other than a wholesale druggist or other dealer in drugs and medicine, to sell or offer for sale at wholesale, or for any person other than a registered pharmacist or a registered assistant pharmacist, to sell or offer for sale at retail, morphine or any of its salts, in this State, and it shall not be lawful for such persons to sell or offer for sale morphine or any of its salts in any bottle, vial, envelope or other package, unless the same shall be wrapped in a scarlet paper or envelope, and all bottles or vials used for the above purpose shall contain not more than one drachm each, and shall have in addition to said scarlet wrapper a scarlet label lettered in white letters, and the same must be upon both vial and wrapper when vials are used, plainly naming the contents of said bottle; and further, that no person shall have the right to change any preparation of morphine from its original package to any other receptacle whatever for the purpose of retailing or dispensing therefrom, but it must be retailed or dispensed only from the original package with scarlet wrapper and scarlet label as aforesaid.

SECTION 2. That any one violating the provisions of the above section shall be guilty of a misdemeanor, and on conviction thereof shall be fined not less than ten nor more than fifty dollars, at the discretion of the court, for each and every violation of the preceding section.

SECTION 3. That all laws and parts of laws in conflict with this act be and the same are hereby repealed.

SECTION 4. This act shall take effect and be in force from and after September 1, 1886.

JOHN C. ENTREKIN,
Speaker of the House of Representatives.

JNO. O'NEILL,
President pro tem of the Senate.

Passed April 8, 1886.

LIST OF MEMBERS

IN ATTENDANCE AT THE

Ninth Annual Meeting, June 8th, 9th and 10th, 1887.

Acker, P.....	Cleveland	Hall, C. F.....	Youngstown
Albro, W. H.....	Medina	Hart, D. P.....	Akron
Alexander, W. W.....	Akron	Hechler, G. L.....	Cleveland
Allen, S. E.....	Akron	Hill, C. E.....	Richwood
Baird, R.....	East Springfield	Himmelman, G. C.....	Akron
Beck, J. I.....	Springfield	Hitchman, A. A.....	Butler
Bellermann, J. H.....	Lancaster	Honecker, A. B.....	Cleveland
Benedict, D. D., M.D.....	Norwalk	Honecker, J. J.....	Cleveland
Berg, F.....	Upper Sandusky	Hopp, L. C.....	Cleveland
Bevard, H.....	Canal Fulton	Horst, J. H.....	Cleveland
Biddle, H. G.....	Cleveland	Huston, C.....	Columbus
Byrider, John.....	Akron	Inman, C. T.....	Akron
Blankenhorn, H.....	Orrville	Inman, S. C.....	Akron
Bort, L. O.....	Logan	Jewett, W. A.....	Lorain
Boyer, H.....	Washington C. H	Johnson, T.....	Steubenville
Bubna, J. V.....	Cleveland	Kautz, F. A.....	Cincinnati
Cassaday, A. S.....	Alliance	Keiper, L.....	Cleveland
Coblentz, F. H.....	Springfield	Kieffer, G.....	Cleveland
Coblentz, V.....	Springfield	Kneeland, C. A.....	Conneaut
Cook, H. C.....	Columbus	Koons, C. W.....	Cleveland
Cornet, G. A.....	Port Washington	Krauter, C. H.....	Youngstown
Crane, R. W.....	Greensburg	Kuhlmeier, H.....	Cleveland
Culler, F. W.....	Cleveland	Lane, E. B.....	Cleveland
Davis, C. W.....	Jeffersonville	Lehr, Phil.....	Cleveland
Davis, W. P.....	Akron	Lewis, A. C.....	Bucyrus
Doran, I. A.....	Rushsylvania	Lewis, A. L.....	Hamden Junction
Eady, H. J.....	Elyria	Lewis, B. G.....	Girard
Emrich, J. H.....	Sandusky	Lloyd, J. U.....	Cincinnati
Feil, J.....	Cleveland	Lynn, G. A.....	Akron
Fennel, C. T. P.....	Cincinnati	McClain, M. H.....	Galion
Fenton, C. F.....	Cleveland	McDowell, O. H.....	Medina
Flandermeyer, H. H.....	Cleveland	McFarland, T. D.....	Canton
Flandermeyer, H. D.....	Cleveland	McKeown, S. W.....	Youngstown
Frederick, J. F.....	Toledo	Martin, W. J.....	Cincinnati
Fulton, M. D.....	Bucyrus	Meyer, W. V.....	Cleveland
Griffiths, H.....	Cincinnati	Miller, C. M.....	Mansfield
Grossklans, J. F.....	Navarre	Morganthaler, P.....	Massillon
Hackedorn, M. L.....	Galion	Murray, S. W.....	Washington C. H
Hale, W. F., M.D.....	Jackson C. H	Neff, B.....	New Carlisle

Newcomb, N. O.....	Cleveland	Springsteen, W. S.....	Cleveland
Nye, C. N	Canton	Stecher, H. W.....	Cleveland
Openheimer, J. H.....	Canton	Stierle, J. G.....	Versailles
Petersilge, A.....	Cleveland	Sturgis, T. A.....	Dalton
Pfeiffer, J.....	Akron	Sullivan, E. N.....	Urbana
Pfiffner, F. J. R.....	Delaware	Taggart, P. S.....	New Lexington
Prohaska, O. F.....	Akron	Thompson, R. A.....	Kent
Rendigs, C. P.....	Cincinnati	Thompson, R. D.....	Akron
Rosewater, N.....	Cleveland	Voss, G. W.....	Cincinnati
Schambs, G. M.....	Cleveland	Wahmhoff, J. H.....	Delphos
Schilling, J. P.....	Louisville	Warner, A.....	Akron
Schroeder, G. A.....	Cleveland	Weber, C. L.....	Canton
Shafer, C. M.....	Canal Fulton	Wertz, W. H. H.....	Dalton
Silberling, J. H.....	Cleveland	West, S. S.....	Cleveland
Smith, L. W.....	Byesville	Weyer, John.....	Cincinnati
Sollmann, L.....	Canton	Whitaker, B.....	Cincinnati
Spencer, P. I., M.D.....	Cleveland	Woods, F. M.....	Warren

ALPHABETICAL LIST OF ACTIVE MEMBERS.

*New Members.

Abbey, J.	Dayton	Barrere, G. W.	Lima
Abbey, W. J.	Dayton	Barr, S. E.	Canton
Acker, P.	Cleveland	Barringer, D., M.D.	Rocky Ridge
Ackermann, J. C.	Columbus	Bartlett, W.	Toledo
Adams, A. A.	Waverly	Batterson, Mrs. E. F.	Belleville
Adderley, W. H.	Cincinnati	Bauer, F. A.	Columbus
Aigin, S. C.	Delaware	Baumgartner, F.	Chillicothe
Albro, W. H.	Medina	*Baumhart, C. C.	Vermillion
Alexander, E. V.	McConnellsville	Baush, K. M.	Zanesville
Alexander, W. W.	Akron	Bayer, E. W.	Cincinnati
Allen, E. H.	Mar'etta	Beall, A.	Williamsburg
Allen, S. E.	Akron	Beall, W. M.	Steubenville
*Altenberger, P. J.	Upper Sandusky	*Beam, J. H.	Powhatan Point
Amann, C.	Sidney	Beany, W. W.	Steubenville
Amann, C. E., Sr.	Portsmouth	Beard, J. M.	Spencerville
Amann, C. E., Jr.	Portsmouth	Beardsley, W. P.	Bainbridge
Amann, F.	Portsmouth	Beck, J. I.	Springfield
Amann, F. O.	Sidney	Beck, J. W.	Lancaster
Anderson, W. P.	Marysville	Belford, Dr. E. A.	Nevada
Arnold, D. R.	Sandusky	Bellermann, J. H.	Lancaster
Ashbrook, C. S.	Ada	Benedict, D. D., M.D.	Norwalk
Atchison, J. R.	London	*Benfield, C. W.	Cleveland
Averbeck, M. J.	Youngstown	Benner, C. C.	Columbus
Ayers, J. M., M.D.	Cincinnati	Bentley, E. S.	Hudson
Ayers, M. A.	Cincinnati	Berg, F.	Upper Sandusky
Bach, W. J.	East Toledo	Berger, J. W.	Columbus
Bain, A. W.	Cincinnati	Betz, O. E.	Cincinnati
Bain, F. W.	Cincinnati	Bevan, J.	Mendon
Baird, R.	East Springfield	Bevard, H.	Canal Fulton
Baker, G. R.	Mt. Vernon	Biehl, L. A.	Sandusky
Baker, P. A.	Mt. Vernon	Biddle, H. G.	Cleveland
Bakhaus, A.	Springfield	Bigler, O.	Cincinnati
Baldwin, F. M.	Blanchester	Black, C. T.	Ripley
Ballenger, C. S.	Akron	Black, W. R.	Findlay
Baltzley, Z. T.	Massillon	Blankenhorn, H.	Orrville

*Blaser, J. T.....	Waverly	Busch, A.....	Woodville
Blehr, J. C.....	New Richmond	Busch, E., M.D.....	Woodville
Blocker, H. C.....	Akron	Busch, H. C., M.D.....	Cleveland
Blum, F. J.....	Canton	*Byrider, J.....	Akron
Bock, A. W.....	Cleveland	Byrne, J.....	Columbus
Bock, F.....	Cleveland	Cadwell, S. D.....	Akron
Bodebender, W.....	Cleveland	Campbell, W. J.....	LaRue
Boehmer, A. L.....	Cincinnati	Carey, M. J., M.D.....	Woodville
Bohl, C.....	Watertown	Carlisle, F.L.....	Newton Falls
Bohn, J. H.....	Camden	Carnahan, J.....	Steubenville
Bohn, M. G.....	Miamisburg	Carnahan, W. G.....	Steubenville
*Boise, J. C.....	Seville	Carnell, H. D.....	Dayton
Bolger, J. C.....	Salem	Carothers, W.....	Carey
Bonar, R. S.....	New Lexington	Carpenter, J. H.....	Cleveland
Bonnell, D. W.....	Hubbard	Carpenter, S. W.....	Delhi
*Bonner, C. A.....	Dayton	Carter, G. H.....	Delaware
*Bort, L. O.....	Logan	Case, F. S.....	Logan
Bower, F. T.....	Toledo	Case, F. S.....	Bellefontaine
Boyd, S. H.....	Wooster	Case, J. H.....	Akron
Boyer, H.....	Washington C. H	Case, L.....	Cleveland
Bracelin, H.....	Bluffton	Casper, T. J., M.D.....	Springfield
Bradley, Q.....	West Jefferson	Cassaday, A. S.....	Alliance
Braun, H.....	Columbus	Chadwick, W. M.....	Findlay
Brant, E. D.....	Hayesville	Champney, A. R.....	Perrysburg
Brenner, C. E.....	Lima	Champney, W. R.....	Perrysburg
Brinker, J. H.....	Bellevue	Chappelear, F. B.....	Zanesville
Brown, F. A.....	New Lisbon	Chapman, C. F.....	.....
Brown, T. F.....	Washington C. H	Charles, X. F.....	Republic
Brown, W. C.....	Columbus	Cheney, F. J.....	Toledo
Brown, W. G.....	Wilmington	Clark, C. A.....	Mt. Sterling
Brodbeck, W. T.....	Columbus	Clark, S. L.....	Wharton
Bruce, J.....	Cleveland	*Claus, G. T.....	Cleveland
Bruck, P. H.....	Columbus	Clayton, E. P.....	Somerset
Bryant, C. W.....	Granville	Cleaveland, C. A.....	Greenfield
*Bubna, J. V.....	Cleveland	Cobb, L. A.....	Cleveland
Buchanan, C. R.....	Harmon	Cobb, R. L.....	Cleveland
Buckwell, A. J.....	Toledo	Coblentz, F. H.....	Springfield
Bukey, J. S.....	Marietta	*Coblentz, G.....	Springfield
Burgitt, J. L.....	Dayton	Coblentz, V.....	Springfield
Burger, A.....	Toledo	Cokefair, C. B.....	College Corners
*Burgess, M. S.....	Caldwell	Colby, W. D.....	Defiance
Burgoyne, W. R.....	Steubenville	Cole, C. W.....	Wharton
Burkhardt, M. A.....	Dayton	Coleman, J. G.....	Mineral
Burton, G. F.....	Springfield	Collett, O. F.....	New Burlington

Collins, E. A.....	Wauseon	Dew, J. T.....	Summerfield
Collins, F. A.....	Newark	Dick, C.....	Sandusky
Colwell, J. M.....	Urbana	Deitz, J. C.....	Dayton
Conkright, A. B.....	Richwood	Dixon, G. M.....	Dayton
Connor, J. O.....	Urbana	Dodge, J. M.....	Cincinnati
Cook, F. M.....	Frospect	Doeller, G.	Hamilton
Cook, H. C.....	Columbus	Donnelly, F. H.....	Wooster
Cook, H. D.....	East Toledo	Donnan, E. V.....	Washington C. H
Cook, J. R.....	Columbus	Doran, I. A.....	Rushsylvania
Cook, W. S.....	East Toledo	Douds, A. H.....	Canton
Cornell, C. R.....	Columbus	Downar, J. R.....	Cambridge
*Cornet, G. A.....	Port Washington	Doyle, S. W.....	Winchester
Cornet, L. A.....	Port Washington	*Drach, G. L.....	Cleveland
Cramer, G. W.....	Urbana	Dreher, L.....	Cleveland
Cramer, S. P.....	Hubbard	Dresky, J. J.....	Cleveland
Crane, E. J.....	Iberia	Dronberger, L. R....	Jamestown, N. Y
Crane, R. W.....	Greensburg	Dull, L. E.....	Forest
Crites, H.....	Akron	Dunlap, G. G.....	Unionport
Crosby, C. M.....	Toledo	Dunn, F. H.....	Bainbridge
*Culler, F. W.....	Cleveland	Durstine, F. H., M.D....	Cleveland
Cunningham, J. C.....	Shreve	Dustin, C. H.....	Cleveland
Cupp, C. V.....	Bellevue	Eady, H. J.....	Elyria
Currey, J. N.....	Georgetown	Edwards, E. B.....	Columbus
Curtiss, C. A.....	Wadsworth	Ellsworth, C. S.....	Brecksville
Danforth, E. C.....	Toledo	Edwards, J. W.....	Bellaire
Daniels, T.....	Toledo	Eger, G.....	Cincinnati
Darrah, D. H.....	Bellaire	Eichberg, J. H.....	Cincinnati
Daugherty, J. U.....	Dayton	*Eisenhour, C. L.....	Massillon
Davies, J. E.....	West Alexandria	Elfers, J. C.....	Cincinnati
*Davis, C. W.....	Jeffersonville	*Ellis, T. B.....	Washington C. H
Davis, J. M.....	Chillicothe	Ely, E. S.....	Barnesville
Davis, T. C.....	Ironton	Elliott, S. T.....	Cleveland
Davis, W. H. C.....	Hillsboro	Emrich, J. H.....	Sandusky
Davis, W. P.....	Akron	Eselman, L. J.....	Fostoria
*Dean, A. H.....	Waverly	Evans, H. W.....	Delphos
Dean, W. D.....	Kenton	Evans, J. S.....	Cincinnati
Deemer, C. H.....	New Lisbon	Evans, J. W.....	Delphos
DeLang, A.....	Cincinnati	Evans, S. B.....	Circleville
Denman, W. M.....	West Unity	Eyman, L. E.....	Groveport
Denison, L.....	Marion	Fabing, J.....	Cincinnati
Dent, J. C.....	Bridgeport	Fallon, J. M.....	Cincinnati
De Rhodes, F.....	Salem	*Farquhar, W.....	Bucyrus
Deutler, S. S.....	Republic	Farrell, H. J.....	Xenia
Deutsch, J. W.....	Cleveland	Feil, J.....	Cleveland

Farley, W. C	Bellaire	Fromme, A.....	Cincinnati
Felt, F. D.....	Wellington	Fuelling, D.....	Wapakoneta
Feemster, J. H.....	Cincinnati	Fulton, M. D	Bucyrus
Feemster, W.....	Cincinnati	Gable, D.....	West Salem
Fennel, C. T. P.....	Cincinnati	Gackenhaimer, D. F.....	Van Wert
Fenner, G. H.....	Cleveland	Gackenhaimer, M. W.....	Van Wert
Fenner, J. C.....	Shiloh	Gaitree, W. B.....	Marietta
*Fenton, C. F.....	Cleveland	Gardner, A. J., M.D....	Grand Rapids
*Ferguson, J. R.....	Cleveland	*Gaube, E.....	Cleveland
Fickardt, F. L.....	Circleville	Gaylord, H. C.....	Cleveland
Fiedler, G. W.....	South Paris	Gegelein, F. L.....	Cleveland
Field, J. W.....	Marysville	Gehring, J. M.....	Cleveland
Finfrock, M. V. B.....	Mansfield	George, A. H.....	Cleveland
Fisher, A.....	Burbank	George, R. H.....	Cleveland
Fischer, E. A.....	Cleveland	Gerstacker, M.....	Cleveland
*Fischer, H. J.....	Cleveland	Gibson, C. J.....	Columbus
Fisher, G. H.....	Toledo	Gilbert, A. W.....	Lima
Fisher, J. V.....	Morristown	Gilbert, H. A.....	Lockland
Fisler, I.....	Urbana	Gillard, W. H.....	Oxford
Fitzpatrick, S. J.....	Fayetteville	Gill, D. W.....	West Liberty
Flandermeyer, H. D.....	Cleveland	*Gilman, C. S.....	Akron
Flandermeyer, H. H.....	Cleveland	Gleick, H. M.....	Cincinnati
Fleck, J. J.....	Tiffin	*Gleim, J. C.....	Cleveland
Fleming, E. C....	Xenia	Glenn, A. H.....	Sardinia
†Flocken, L. H.....	Marion	Glines, G. W.....	Cleveland
Flood, W. H.....	Cleveland	Godfrey, C. P.....	Dayton
Fogle, G. T.....	Alliance	Godman, C. A.....	Cleveland
Foland, D. J.....	Wilmington	Goebel, C. W.....	Springfield
Foley, J. B.....	Steubenville	Goodbread, J. N.....	Nevada
Foncanon, G. U.....	Liberty Center	Goodman, E	Cincinnati
Forbes, J. W....	Cincinnati	Gordon, W. J. M.....	Cincinnati
Foraker, J. W.....	Corning	Graham, A., Jr.....	Ottawa
Forrest, J. T.....	Cleveland	Graham, C. V.....	Zanesville
Fortlage, J. H.....	Cleveland	Graham, W. H.....	Zanesville
Foster, A. M.....	Steubenville	*Grayum, C. W.....	Gallipolis
Francis, H. S.....	Uhricksville	Greenamyer, E., M.D....	East Palestine
Frank, A.....	Wapakoneta	Grether, J.....	Akron
Fraser, H. J.....	East Palestine	Greve, T. L. A.....	Cincinnati
Fratz, J. G.....	Cincinnati	Greyer, C.....	Cincinnati
Frazer, G. M.....	Toledo	Griffith, H. H.....	Cincinnati
*Frederick, J. M.....	Akron	Groenland, R.....	Cincinnati
French, L. B.....	Salem	Grosse, W. F.....	Cleveland
Friedland, J. F.....	Coalton	Grossklaus, J. F.....	Navarre
*Friedrick, J. F.....	Toledo	Grossman, F. A.....	Cleves

†Correspondent for Marion Co. in place of E. C. Walt.

Grund, H. C.	Fremont	Herbst, F. W'	Co
Guthrie, J. H.	Conneaut	Herwig, G. A.	Cincinnati
Gysel, R.	Toledo	Heydrick, L.	Toledo
Haag, G. D.	Cleveland	Hickman, W. G.	Nelsonville
Haber, L. A.	Cleveland	Hickok, H. M.	Ashtabula
*Haeefe, G. L., M.D.	West Richfield	*Hildaboldt, C. W.	Germanstown
Hackedorn, M. L.	Galion	Hildreth, N. G.	Cheviot
Hale, S. J.	Avondale	Hill, C. E.	Richwood
Hale, W. F., M.D.	Jackson	Hill, F. P.	Elyria
Hall, C. F.	Youngstown	Hilton, L. R.	Hillsboro
Hall, L. B.	Cleveland	Himmelman, G. C.	Akron
Hall, W. J.	Cincinnati	*Hines, J. A.	Van Wert
Hamlin, R. E.	East Toledo	Hinds, J. W.	Marion
Hank, T. B., M.D.	Sylvania	Hitchman, A.	Butler
Hare, A.	Bettsville	Hoberman, H. C.	Marion
*Harley, J. P.	Lima	Hochstetler, J. C.	Doylestown
Harmon, M. M.	Columbus	Hoehn, J.	Cleveland
*Harper, C. B.	Leetonia	Hoffman, J.	Cincinnati
Harrington, F.	Logan	Hoffman, J. L.	New Bremen
Harrison, J. M.	Cincinnati	Hoffman, O. L.	Columbus
Hart, D. P.	Akron	Hofing, A. J.	Cincinnati
Hart, W. T.	Cleveland	Hoge, J. B.	St. Clairsville
Hartness, W. H.	Cleveland	Holman, H. N.	Columbus
Hatton, E. M.	Zanesville	Hollenbeck, E. F.	Cincinnati
Hauck, T.	Columbus Grove	Hollenbeck, M. W.	Cincinnati
Hauenstein, A.	Bluffton	Hollinger, T.	Columbus
Hauser, J. C.	Sandusky	*Holloway, W. G.	Springfield
Hauss, J. J.	St. Marys	Honecker, A.	Cleveland
Haven, W. H.	Findlay	Honecker, J. J.	Cleveland
Hawkins, M. S.	Salem	Hoopes, W. W.	Minerva
Hawkins, R. L.	Cincinnati	Hoover, Z. T.	Dayton
Hawley, A. K.	Jefferson	Hopp, L. C.	Cleveland
Hawthorn, D. M.	Cambridge	Hornung, J.	Dresden
Heath, F. M.	White House	Horst, J. H.	Cleveland
Hebner, A.	Dayton	Hosach, C.	Frederickstown
Hechler, G. L.	Cleveland	Hovekamp, J. J.	Cincinnati
Heinemann, O.	Cincinnati	Howson, A. B.	Chillicothe
Heinemann, A.	Cincinnati	Howson, W. H.	Chillicothe
Heister, J. P.	Cincinnati	Hoy, B. F.	Holmesville
*Heister, U. S.	Springfield	Hubbard, E. B.	Tiffin
Heitzman, A.	Toledo	Huber, J. M.	Findlay
Heller, M. M.	Cleveland	Hudson, W. J.	South Charleston
Henderson, C. B.	Athens	Hull, H. M.	Cleveland
Henkelman, H. K.	Sandusky	Huston, C.	Columbus

Huston, J. C.....	College Corner	Kells, H. B.....	Steubenville
Hutchings, J. H.....	Bellevue	Kerr, C. D.....	Gallipolis
Hutchison, J. C.....	Cambridge	Kieffer, G.....	Cleveland
*Hutt, P.....	Waverly	Kilbourne, H. A.....	Canton
Hyers, W. H.....	Dayton	King, F. H.....	Cincinnati
Ink, C. E.....	Columbiana	Kiplinger, J. W.....	West Salem
Ink, H. H.....	Leetonia	Kipp, W.....	Greenville
Inman, C. T.....	Akron	Kirkenda'l, C. F.....	Akron
Inman, S. C.....	Akron	Kirchhofer, P. P.....	Massillon
Ireman, J. W.....	Wharton	Klahr, J. A.....	Bloomville
Irwin, J. L.....	Ann Arbor, Mich	Klayer, C. F.....	Cincinnati
*Isaacs, B. S.....	Dayton	Klayer, L.....	Cincinnati
Jacobi, A.....	Cincinnati	Klein, D.....	Madisonville
Jeffrey, D. G.....	Tiro	Klein, S.....	Cincinnati
Jeffrey, F. M.....	Tiro	Knapp, D. A.....	Kilbourn
Jewitt, W. A.....	Lorain	Kneeland, C. A.....	Conneaut
Johnson, C. B.....	Middleton	Koehnken, H. H.....	Cincinnati
Johnson, C. S.....	New Concord	Koenig, J. H.....	Cincinnati
Johnson, J. D.....	Massillon	Koch, H.....	Cincinnati
Johnson, J. M.....	Steubenville	Kolb, A.....	Columbus
Johnson, J. R.....	Zanesville	Koons, C. W.....	Canton
Johnson, T.....	Steubenville	*Krauter, C. H.....	Youngstown
Johnson, W. H.....	Middletown	Kuerze, R. M.....	Cincinnati
*Johnson, W. R.....	Steubenville	Kuhlmeier, H.....	Cleveland
Johnston, F. T.....	Bucyrus	Kuqua, S. J.....	Springfield
Jones, J. W.....	Cincinnati	Kurfurst, H. F.....	Dayton
Jones, T. A.....	Venedocia	*Kutchbauch, J. F.....	Dayton
Jones, W. D.....	Newark	Kylus, G. W.....	Cincinnati
Judge, J. F., M.D.....	Cincinnati	Lace, J. H.....	Cleveland
Judd, O. S.....	Spencerville	Laffer, J. M.....	Akron
*Kaestlen, S. E.....	Cleveland	Lammert, C. J.....	Cincinnati
Kallmeyer, F. G.....	Cincinnati	Lamparter, J. O.....	Akron
*Kalter, G. W.....	Dayton	Lane, E. B.....	Cleveland
Kampfmueeller, C.....	Cincinnati	Landers, G. W.....	Cincinnati
Kapper, M.....	Canton	Lansing, R. H.....	Chillicothe
Karb, O. J.....	Columbus	Lash, E. R.....	Athens
Kauffman, G. B.....	Columbus	Latin, G.....	Dayton
Kauffman, L. B.....	Columbus	Laubach, G. R.....	Wooster
Kautz, F. A.....	Cincinnati	*Lautenschlager, G. C.....	Dayton
Kayser, W.....	Wapakoneta	Law, G. F.....	Willoughby
Keiper, F.....	Cleveland	Lawson, D. J.....	Warsaw
Keiper, L.....	Cleveland	*Lehmkuhl, J. B.....	Hamilton
Kelley, W. W.....	Ottawa	Leitzell, A. D.....	Seville
		Lehr, J.....	Cleveland

Lehr, P.	Cleveland	McKimmie, J. W.	Clarington
Lehrer, C. A.	Sandusky	Maddox, W.	Ripley
LeQuesne, A. A. K.	Cleveland	Maddox, W. E.	Ripley
LeQuesne, H. J. N.	Cleveland	*Manabach, O. A.	Columbus
Lewis, A. C.	Bucyrus	Markle, S. M. B.	Ashland
Lewis, A. L.	Hamden Junction	Marmon, J. Y.	Lima
*Lewis, B. G.	Girard	Marquardt, J. F.	Tiffin
Lewis, E. D.	Jackson	Mason, C. C.	Columbus
Lickes, R. P.	Steubenville	Martin, W. J.	Cincinnati
Liggett, N. E.	Marysville	*Mattison, T. C.	Berea
Lindsey, E. H.	Mansfield	Maxwell, G. F.	West Liberty
Lisle, J. D., M.D.	Springfield	May, A. F.	Cleveland
Lloyd, C. G.	Cincinnati	Mayell, A.	Cleveland
Lloyd, J. U.	Cincinnati	Meggenhofen, E.	Chillicothe
Lloyd, N. A.	Cincinnati	Meiminger, A.	Cincinnati
Lohman, O. F.	Cleveland	Melsheimer, E. J.	Shelby
Long, J. M.	Cincinnati	Merrell, G.	Cincinnati
Long, W. A.	Steubenville	Metcalt, L. J.	Cleveland
Luce, J. D.	Urbana	Meyer, J.	Lima
Luckey, G. W.	South Charleston	Meyer, W.	Lima
Ludlow, C.	Springfield	*Meyer, W. V.	Cleveland
Luster, S. W.	Cleveland	Miller, C. M.	Mansfield
Lytle, J. B., M.D.	Unionport	*Miller, G. H.	Cleveland
Lynn, G. A.	Mineral Ridge	Miller, L. A.	Steubenville
Lyle, J. B.	Fredericksburg	Miller, P. B.	Gettysburg
McCarter, E. N.	Columbus	Montanus, P. E.	Springfield
McClain, M. H.	Galion	Moon, D. H.	Blanchester
McConnell, D.	Green Springs	Mooney, M. L.	Cardington
McConney, W. T.	Atwater Station	*Moore, C. A.	Cambridge
McCormick, J. T.	Xenia	Moore, J. C.	West Mansfield
McCoy, F.	Cleveland	Morgan, C. H.	Cleveland
McCoy, J. N.	Keaton	Morganthaler, P.	Massillon
McCulloch, R. S.	Fremont	Morr, T. N.	West Salem
McCullough, A. H.	Mansfield	Morris, W. E.	New Holland
McDona'd, S. S.	New Lexington	Morrison, R. J.	Steubenville
McDowell, O. H.	Medina	Mo's, J. W.	New Richland
McFarland, T. D.	Canton	Mueller, C. H.	Cincinnati
McGaughey, I. H.	Hubbard	Mund, J. F.	Cleveland
McGill, W. W.	Salineville	Murdock, A. W.	Bellefontaine
McConagle, A. B.	Brilliant	Murray, F. M., M.D.	Bluffton
McIlvaine, J. J.	Cleveland	Murray, S. W.	Washington C. H.
McKean, C. W.	Salineville	Myers, D.	Cleveland
McKee, W. H.	Athens	Myers, G. S.	Carey
McKeown, S. W.	Youngstown	Nachtrieb, C. J.	Wauseon

*Neff, B., M.D.....	New Carlisle	*Pfeiffer, J.....	Akron
Neff, C. H.....	New Carlisle	Phffner, F. J. R.....	Delaware
*Nelson, J. W., M.D.....	Springfield	Phillips, C. W.....	Cincinnati
Nemec, J. A.....	Cleveland	Phleger, W. F.....	Sandusky
Newcomb, N. O.....	Cleveland	Piercy, C. G.....	Wilshire
Nichols, E. S.....	Canton	*Plath, O. E.	Cincinnati
Nichols, J.....	Columbus	Pohlmeyer, E. A.....	Cincinnati
Nichols, J. M.....	Columbus	Pope, J.....	Burgoon
Nipgen, J. A.	Chillicothe	Porter, E. D.....	Cleveland
Noble, W. W.	Berea	Porter, F.....	Paulding
Noell, C. H.....	Van Wert	*Porter, L. R.....	Cleveland
Norris, E. P.....	Cleveland	Potts, J. C.....	Bellevue
Norwood, T. F.....	Cincinnati	Pretzinger, R.....	Dayton
Nye, C. N.....	Canton	Price, A. Q.....	Swanton
Nye, D. H.....	Toledo	Probeck, G. J.....	Cleveland
Nye, H. L.....	Zanesville	Prokaska, O. F. Ph. G.....	Akron
O'Brien, Wm.....	Cleveland	Pruden, D.....	Dayton
Ogan, F. W.....	Jamestown	Pugh, G. C.....	Toronto
Ogier, W. R.....	Columbus	Purdy, T. L.....	Covington
Ohler, J.....	Fremont	Pyle, S. B.	Richmond
Olliger, L. P.	Wooster	Quinlin, W. A.....	Loramie
*Openheimer, J. H.....	Canton	Quinn, J. W.....	Hillsboro
Opperman, E.....	Cleveland	Rabe, H. H.....	Clyde
Orr, W. C.....	Columbus	Rauchfuss, O.....	Cincinnati
Otis, J. C.....	Cincinnati	Rauchkolb, J.....	Columbus
Overbeck, B. H., Jr.....	Cincinnati	Rave, H.....	Cleveland
Overholser, S. H....	West Manchester	Read, J. A..	Wauseon
Palmer, J. G.....	Conneaut	Read, M. E.....	Wauseon
Pape, Josephine.....	Sandusky	Reaser, E. W.....	Ashland
Park, W. H.....	Elyria	Reasoner, M.D.....	Bellaire
Parsons, G. F.....	Troy	Reber, B. C.	Logan
Parsons, R.....	Cleveland	Reed, C. D.....	Pomeroy
Patterson, J. A.....	St. Clairsville	Reed, E.	Portsmouth
Patterson, J. J.....	St. Clairsville	Reed, E. M. Ph. G.....	Middletown
Patrick, M.....	Norwalk	Reed, I. N.....	Toledo
Payne, C. E.....	Port Clinton	Rees, J. N.....	South Charleston
Peck, E. D.....	Toledo	Reid, H.....	Lebanon
Peck, J. H.....	Cleveland	Reinert, L., Jr.....	Columbus
Peters, E. J.....	Akron	Reisinger, L. K.....	Galion
Peters, V. O.....	Shelby	Rendigs, C. P.....	Cincinnati
Petersilge, A.....	Cleveland	Reul, W. W.....	Delphos
Peters, C. C.....	Zanesville	Reum, H. F.....	Cincinnati
Patton, J. G.....	Newark	Rhoads, W. L.....	Ashland
Peyton, W. T.....	Manchester	Rice, B. F.....	Newton Falls

Richards, J. W.....	Columbus	Schmidt, C.....	Brooklyn Village
Richey, S. C.....	Oxford	Schneider, A.	Cincinnati
Richmond, E. A.....	Massillon	Schroeder, G. A.....	Cleveland
Richter, S. F., Philo, P. O.	Taylorsville	*Schueller, A. W.....	Columbus
Ridgley, W. F.	Steubenville	Schueller, F. W.....	Columbus
Ridgway, B. G.....	Cedarville	Schueller, E.....	Columbus
Ridgway, C.....	Yellow Springs	Schulte, H. J.....	Cincinnati
Ridgway, C. M.....	Springfield	Schwartz, J. C.....	Hamilton
*Ritter, L. F.....	Columbus	Scott, A. C.....	Columbus
Roberts, C. A.....	Springfield	Scott, I. E.....	Apple Creek
Robertson, N. L.	Dayton	Seeborn, A. W.....	Pomeroy
Robinson, E. J.....	London	Seltzer, S. T.....	Columbus
Robinson, G. R.....	Cleveland	Seltzer, D. F.....	Akron
*Robinson, W. L.	Gallipolis	Selzer, E. R.....	Cleveland
*Rockwood, C. H....	North Amherst	Seybert, R. L.....	Hillsboro
*Roe, R. B.....	Elyria	*Shafer, C. M. Ph. C....	Canal Fulton
Rogers, N. P.....	Kingston	Shallcross, J. H.....	Columbus
Roller, J. L.....	Toledo	*Sharpe, J. A.....	Akron
Roller, R. S.....	Wooster	Sheekley, C. W.....	Cleveland
Rosewater, N.....	Cleveland	*Sheets, G. F.....	East Palestine
Ross, J.....	Wadsworth	Shellabarger, E.....	Laura
Roth, J. C.....	Marion	Shepherd, J. S....	Nelsonville
Roudabush, D.....	Goshen	Sherrick, P. F.....	Delphos
Roy, A. H.....	Baltimore, Md	Sherwood, D. W.....	Cleveland
Rulmann, R. A.....	Minster	*Sherwood, H. J., Jr....	Cleveland
Ruppert, J.....	Cincinnati	Sherwood, L.....	Columbus
Rust, B. S.....	Cincinnati	Shotwell, W. D.....	Cincinnati
Ryan, W. J.....	Junction City	Shuesler, J. J.....	Loveland
Sachs, E.....	Dayton	Shull, W. F.....	Beaver Dam
Sage, J. R.....	Prairie Depot	Silberling, J. H.....	Cleveland
Samsel, H. S.....	Bloomville	Simmons, A. H.....	Conneaut
Sanford, H. S.....	Lima	Simonson, W.....	Cincinnati
Sanford, S., Jr.....	Lima	Skeggs, C. W., M.D....	Green Springs
Sauer, L. W.....	Cincinnati	Slocum, E. L.....	Lancaster
*Saur, J. C.....	Napoleon	Slosson, F. W.....	Cleveland
Savidge, G. A.....	McCutchenville	Smedley, C. W.....	Cincinnati
Schaaf, J. H.....	Gallipolis	Smith, C. A.....	Springfield
Schaefer, M. B.....	Toledo	Smith, E. D. F.....	West Richfield
Schamps, G. M.....	Cleveland	Smith, E. T.....	West Richfield
Schellentrager, E. A....	Cleveland	Smith, L. W.....	Byersville
Schilling, J. P.....	Louisville	Smith, G. W.....	Cincinnati
Schlaubach, E. J.....	Harmar	Smith, W. G.....	Hillsboro
*Schoenhut, C. H.....	Cleveland	Smith, W. H., M.D.....	Howard
Schmidt, A.....	Springfield	Smith, W. I.....	Springfield

Smith, W. P., Jr.....	Tiffin	Sturgis, T. A.....	Dalton
Smithnight, A.....	Cleveland	Stutz, F. A.....	Ashley
Snow, A. G.....	Cleveland	Styer, W. H.....	Marietta
Sollmann, L.....	Canton	Sulliger, W. R. H.....	Forrest
Sords, T. V.....	Cleveland	Sullivan, E. M.....	Urbana
Spangenberg, E.....	Cincinnati	Sulzbacker, W. F.....	Chillicothe
Spalding, C. D.....	Galion	Sykes, E. A.....	Chicago
Spayd, C. E.....	Toledo	Sweeney, G. W.....	Marion
Spencer, C. A.....	Crestline	Swan, W. S.....	Toledo
Spencer, A.....	New Straitsville	Swingle, J. L.....	Mt. Gilead
Spengler, J. G.....	Dayton	Taggart, P. S.....	New Lexington
Spenser, M. H., Miss.....	Cleveland	Taylor, F. S.....	Wilmington
Spencer, P. I., M.D.....	Cleveland	Taylor, J. D.....	Roseville
Spidell, C. E.....	Wilmet	Taylor, J. P.....	Mechanicsburg
Spieth, W. F.....	Cleveland	Taylor, U. A.....	Toledo
Spohn, R. C.....	Toledo	*Terrell, E.....	North Ridgeville
Sponsel, J. G.....	Cincinnati	Thompson, J.....	Auburndale
Sprague, L. C.....	Pemberville	Thompson, H. W.....	Sidney
Springsteen, W. S.....	Cleveland	Thompson, R. A.....	Kent
Stahl, H.....	Sidney	Thompson, R. D.....	Akron
*Stahlhuth, E. H. W.....	Cincinnati	Thomas, E. S.....	Fremont
Stammel, C. A.....	Cincinnati	Thorp, A.....	Cincinnati
Starbird, B. F.....	New London	Thuma, J. W.....	Shauck's, P. O
Starbird, C.....	New London	Thurston, A.....	Grand Rapids
Stausmyer, C.....	Fremont	Tielke, G.....	Cleveland
Stecher, H. W.....	Cleveland	Tiffany, H. B.....	Clyde
Steele, E. M.....	Steubenville	Titsworth, R. L.....	Mt. Victor
Steele, C. H.....	Steubenville	Tobey, C. W.....	Troy
Steele, W. W.....	Chillicothe	Tompkins, J. S.....	Avondale
Steinhoff, A.....	Fort Jennings	Trimble, R. C.....	Salem
Stenger, E.....	Cincinnati	Troupe, T.....	Springfield
Stewart, F.....	Cleveland	Tschanen, G. W.....	Upper Sandusky
Stewart, H. W.....	Steubenville	Tschanen, W.....	Upper Sandusky
Stierle, J. G.....	Versailles	*Tulloss, B. L.....	Akron
Stilson, S. B.....	Gilsonburg	Tupa, F. J.....	Cleveland
Stoskopf, G.....	Cleveland	Turney, L. M.....	Holgate
Strobel, J. B.....	Ironton	Tuttle, C., M.D.....	Berlin Heights
Strock, E. E.....	Cleveland	*Tyson, A. D.....	Middletown
Strome, J. J.....	Millersburg	Ullman, W. P.....	Loudonville
Strong, R. B.....	Jamestown	Urban, J. P.....	Cleveland
Strong, S. M.....	Cleveland	Valentine, F. E.....	Springfield
Stuckenholt, W.....	Cleveland	Van Stone, T.....	Toledo
Stumm, R. C.....	Wilmington	Virden, M. H.....	La Rue
Sturgis, J. R.....	Dalton	Vogel, A. A.....	Columbus

Vogt, A. L.	Delaware	White, E. B.	Lancaster
Voigt, F. H.	Holgate	White, J. B.	Bellaire
Vollnogle, P. F.	New Waterford	*White, W. E.	Middlepoint
Von Stein, J. H.	Upper Sandusky	Whitteker, B.	Cincinnati
Vorikamp, H. F.	Milford	Widney, H. M.	Zanesville
Voss, G. W.	Cincinnati	Wildenthaler, G. A.	Sandusky
Wagner, H.	Cincinnati	Willman, E. P.	Smithville
Wahmhoff, F. S.	Delphos	Williams, E. R.	Nevada
Wahmhoff, J. H.	Delphos	Williams, R. G.	Alliance
Walding, W. J.	Toledo	Wilson, A. C.	Piqua
Walker, F. A.	Milan	Wilson, W. C.	Clarkson
Walker, J. F.	Richmond	Winkleman, F. J.	Cincinnati
Walker, W. P.	Washingtonville	Winslow, H. G.	Cincinnati
Wall, C. L.	Cambridge	Winters, A.	Ironton
Walt, E. C.	Circleville	Wisterman, I.	Shanes Crossing
Walton, H. C.	Cincinnati	Witschner, M. G.	Tiffin
Warner, A.	Akron	Wolf, C. P., M.D.	Wilmot
Warner, A. C.	Tiffin	*Wood, A.	Cleveland
Waterman, H.	Ravenna	Wood, J. M., M.D.	Hepburn
Weber, C. L.	Canton	*Woods, F. M.	Warren
Webb, F.	Cincinnati	Woodward, N. G.	Defiance
Webber, T. J.	Plymouth	Worley, G.	Covington
Weden, A. M.	Cleveland	Worthington, A. F.	Cincinnati
Weichsel, E.	Cleveland	Wrede, H.	Cincinnati
Weil, J.	Findlay	Wright, H.	Belmont
Weiler, J. J.	Cleveland	Wright, W. C.	Cleveland
Weisbrodt, G.	Middletown	Wurtzbacher, L. H.	Delaware
Weller, W. A.	Zanesville	Wyker, J. D.	Fredricktown
Wells, J. D.	Cincinnati	Yorston, M. M.	Cincinnati
Wells, W. P.	Zanesville	Youmans, D. A.	Akron
Wenning, G. H.	Cincinnati	*Young, F. H.	Lima
Werner, W. M.	Painesville	Zartman, D.	Independence, Butler P. O
*Wertz, W. H. H.	Dalton	Zeiser, A. L.	Cincinnati
West, C.	Toledo	Zeller, A.	Dayton
West, J. E., M.D.	St. Clairsville	Zickes, O.	Cleveland
West, W. K.	Toledo	Zigler, W. A.	Fostoria
West, W. L., M.D.	Matamoras	Zimmerman, J.	Wooster
West, S. S.	Cleveland	Zimmerman, J. R.	Wooster
Weusthoff, O. S.	Dayton	Zimmerman, L. P.	Fremont
Weyer, J.	Cincinnati	Zuenkeler, J. F.	Cincinnati
Wheeler, A. C.	Lima	Zwerner, J. A.	Columbus

ROLL OF MEMBERS.

HONORARY MEMBERS.

Bedford, P. W., Prof.,	-	-	New York,	-	-	-	-	1883
Maisch, J. M., Prof.,	-	-	Philadelphia,	-	-	-	-	1882
Mohr, Chas.,	-	-	Mobile, Ala.,	-	-	-	-	1887
Remington, J. P., Prof.,	-	-	Philadelphia,	-	-	-	-	1883
Squibb, E. R., M.D.,	-	-	Brooklyn,	-	-	-	-	1882

ACTIVE MEMBERS.

Members are requested to report any inaccuracies in these lists, and to notify the Secretary and Treasurer of all changes of address.

Ada, Harding Co.			Warner, A.,	-	-	-	1886
Ashbrook, C. S.,	-	-	1886	Youmans, D. A.,	-	-	1883
Akron, Summit Co.				Alliance, Stark Co.			
Alexander, W. W.,	-	-	1886	Cassaday, A. S.,	-	-	1884
Allen, S. E.,	-	-	1886	Fogle, G. T.,	-	-	1881
Ballenger, C. S.,	-	-	1886	Williams, R. G.,	-	-	1882
Blocker, H. C.,	-	-	1882	Apple Creek, Wayne Co.			
Byrider, J.,	-	-	1887	Scott, I. E.,	-	-	1882
Cadwell, S. D., M.D.,	-	-	1883	Ashland, Ashland, Co.			
Case, S. H.,	-	-	1885	Markle, S. M. B.,	-	-	1882
Crites, H.,	-	-	1886	Reaser, E. W.,	-	-	1880
Davis, W. P.,	-	-	1886	Rhoads, W. L.,	-	-	1884
Frederick, J. M.,	-	-	1887	Ashley, Delaware Co.			
Gilman, C. S.,	-	-	1887	Stutz, F. A.,	-	-	1882
Grether, John,	-	-	1883	Ashtabula, Ashtabula, Co.			
Hart, D. P.,	-	-	1879	Hickok, H. M.,	-	-	1883
Himmelman, G. C.,	-	-	1886	Athens, Athens Co.			
Inman, C. T.,	-	-	1884	Henderson, C. B.,	-	-	1883
Inman, S. C.,	-	-	1886	Lash, E. R.,	-	-	1881
Kirkendall, C. F.,	-	-	1886	McKee, W. H.,	-	-	1885
Lamparter, J. O.,	-	-	1886	Atwater Station, Portage Co.			
Laffer, J. M.,	-	-	1886	McConney, W. T.,	-	-	1884
Peters, E. J.,	-	-	1886	Auburndale, Lucas Co.			
Pfeiffer, J.,	-	-	1887	Thompson, J.,	-	-	1881
Prokaska, O. F., Ph. G.,	-	-	1887	Bainbridge, Cross Co.			
Selzer, D. F.,	-	-	1883	Beardsley, W. P.,	-	-	1884
Sharpe, J. A.,	-	-	1887	Dunn, F. H.,	-	-	1881
Tulloss, B. L.,	-	-	1887	Barnesville, Belmont Co.			
Thompson, R. D.,	-	-	1886	Ely, E. S.,	-	-	1885

Beaver Dam, Allen Co.			Brooklyn Village, Cuyahoga Co.		
Shull, H. F.,	-	1886	Schmitt,, Carl	-	1880
Bellaire, Belmont Co.			Bucyrus, Crawford Co.		
Darrah, D. H.,	-	1882	Farquhar, W.,	-	1887
Feeley, Wm. D.,	-	1883	Fulton, M. D.,	-	1880
Reasoner, M. D.,	-	1882	Johnston, F. T.,	-	1879
White, J. B.,	-	1884	Lewis, A. C.,	-	1881
Bellefontaine, Logan Co.			Burbank, Wayne Co.		
Case, F. S.,	-	1880	Fisher, A.,	-	1883
Murdock, A. W.,	-	1880	Burgoon, Sandusky Co.		
Belleville, Richland O.			Pope, J.,	-	1880
Hare, A. W.,	-	1884	Byesville, Guernsey Co.		
Potts, J. C.,	-	1883	Smith, L. W.,	-	1884
Batterson, Mrs. E. F.,	-	1883	Caldwell.		
Bellevue, Huron Co.			Burgess, M. S.,	-	1887
Brinker, J. H.,	-	1885	Cambridge, Guernsey Co.		
Cupp, C. V.,	-	1885	Downar, J. R.,	-	1882
Hutchings, J. H.,	-	1884	Hawthorne, D. M.,	-	1884
Belmont, Belmont Co.			Hutchison, J. C.,	-	1882
Wright, H.,	-	1884	Moore, C. A.,	-	1887
Berea, Cuyahoga Co.			Wall, C. L.,	-	1884
Mattison, T. C.,	-	1887	Camden, Preble Co.		
Noble, W. W.,	-	1883	Bohn, J. H.,	-	1884
Berling Heights, Erie Co.			Canal Fulton, Stark Co.		
Tuttle, C., M. D.,	-	1886	Bevard, H.,	-	1882
Bettsville, Seneca Co.			Shafer, C. M., Ph. C.,	-	1887
Hitchman, A.,	-	1881	Canton, Stark Co.		
Blanchester, Clinton Co.			Barr, S. E.,	-	1882
Baldwin, F. M.,	-	1886	Blum, F., Jr.,	-	1885
Moon, D. H.,	-	1884	Chapman, C. F.,	-	1881
Bloomville, Seneca Co.			Douds, A. H.,	-	1884
Klahr, J. A.,	-	1881	Kapper, M.,	-	1884
Samsel, H. S.,	-	1881	Kilbourne, H. A.,	-	1884
Bluffton, Allen Co.			Koons, C. W.,	-	1881
Bracelin, H.,	-	1880	McFarland, T. D.,	-	1884
Hauenstein, A.,	-	1883	Nichols, E. S.,	-	1881
Brecksville, Cuyahoga Co.			Nye, C. N.,	-	1884
Ellsworth, C. S.,	-	1886	Openhimer, J. H.,	-	1887
Bridgeport, Belmont Co.			Sollmann, L.,	-	1884
Dent, J. C.,	-	1884	Weber, C. L.,	-	1884
Judkins, T. C.,	-	1884	Cardington, Morrow Co.		
Brilliant, Lawrence Co.			Mooney, M. L.,	-	1879
McGonagle, A. B.,	-	1884	Carey, Wyandot Co.		
			Carothers, W.,	-	1879
			Myers, G. S.,	-	1884

Cedarville, Greene Co.			Greve, T. L. A.,	-	-	1881
Ridgway, B. G.,	-	1886	Greyer, J.,	-	-	1881
Cheviot, Hamilton Co.			Griffith, H. H.,	-	-	1884
Hildreth, N. G.,	-	1884	Groenland, R.,	-	-	1886
Chicago, Huron Co.			Hale, S. J. (Avondale),	-	-	1884
Sykes, E. A.,	-	1884	Hall, W. J.,	-	-	1884
Chillicothe, Ross Co.			Harrison, J. M.,	-	-	1884
Baumgartner, F.,	-	1880	Hawkins, R. L.,	-	-	1884
Davis, J. M.,	-	1880	Heinemann, A.,	-	-	1886
Howson, A. B.,	-	1885	Heinemann, O.,	-	-	1884
Howson, W. H.,	-	1881	Heister, J. P.,	-	-	1884
Lansing, R. H.,	-	1880	Herwig, C. A.,	-	-	1880
Meggenhofen, E.,	-	1881	Hoffman, J.,	-	-	1884
Nipgen, J. A.,	-	1880	Hofling, A. J.,	-	-	1884
Steel, W. W.,	-	1882	Hollenbeck, E. F.,	-	-	1882
Sulzbacher, W. F.,	-	1884	Hollenbeck, M. W.,	-	-	1884
Cincinnati, Hamilton Co.			Hovekamp, J. J.,	-	-	1881
Adderley, W. H.,	-	1884	Irwin, J. L.,	-	-	1884
Ayers, J. M., M.D.,	-	1879	Jacobi, A.,	-	-	1884
Ayers, Mary A.,	-	1882	Jones, J. W.,	-	-	1880
Bain, A. W.,	-	1882	Judge, J. F., M.D.,	-	-	1879
Bain, F. W.,	-	1884	Kallmeyer, F. G.,	-	-	1886
Bayer, E. W.,	-	1884	Kampfmuehler, C.,	-	-	1884
Betz, O. E.,	-	1884	Kautz, F. A.,	-	-	1880
Bigler, O.,	-	1880	King, F. H.,	-	-	1886
Boehmer, A. L.,	-	1883	Klayer, C. F.,	-	-	1883
De Lang, A.,	-	1886	Klayer, L.,	-	-	1881
Dodge, J. M.,	-	1880	Klein, S.,	-	-	1884
Egar, Geo.,	-	1880	Koehnken, H. H.,	-	-	1880
Eichberg, J. H.,	-	1884	Koenig, J. H.,	-	-	1881
Elfers, J. C.,	-	1883	Koch, H.,	-	-	1886
Evans, J. S.,	-	1884	Kuerze, R. M.,	-	-	1881
Fabing, J.,	-	1884	Kylius, G. W.,	-	-	1884
Fallon, J. M.,	-	1882	Lammert, C. J.,	-	-	1882
Feemster, J. H.,	-	1884	Landers, G. W.,	-	-	1884
Feemster, W.,	-	1884	Lloyd, C. G.,	-	-	1886
Fennel, C. T. P.,	-	1884	Lloyd, J. U.,	-	-	1879
Forbes, J. W.,	-	1883	Lloyd, N. Ashley,	-	-	1880
Fraiz, J. G.,	-	1883	Long, J. M.,	-	-	1880
Fromme, A.,	-	1884	Martin, W. J.,	-	-	1881
Gleick, Wm. M.,	-	1883	Meininger, A.,	-	-	1881
Goodman, E.,	-	1880	Merrell, Geo.,	-	-	1880
Gordon, W. J. M.,	-	1884	Mueller, C. H.,	-	-	1884

Gerstacker, M.,	-	-	1882	O'Brien, Wm.,	-	-	1884
Gleim, J. C.,	-	-	1887	Opperman, E.,	-	-	1881
Glines, G. W.,	-	-	1880	Parsons, R.,	-	-	1880
Godman, C. A.,	-	-	1883	Peck, J. H.,	-	-	1881
Grosse, W. F.,	-	-	1884	Petersilge, A.,	-	-	1880
Haag, G. D.,	-	-	1884	Porter, E. D.,	-	-	1882
Haber, L. A.,	-	-	1881	Porter, L. R.,	-	-	1887
Hall, L. B.,	-	-	1880	Probeck, G. J.,	-	-	1885
Hart, W. T.,	-	-	1882	Rave, H.,	-	-	1880
Hartness, W. H.,	-	-	1880	Robinson, G. R.,	-	-	1885
Hechler, G. L.,	-	-	1880	Rosewater, N.,	-	-	1879
Heller, M. M.,	-	-	1880	Schambs, G. M.,	-	-	1883
Hoehn, J.,	-	-	1883	Schellentragar, E. A.,	-	-	1880
Honecker, A.,	-	-	1881	Schoenhut, C. H.,	-	-	1887
Honecker, J. J.,	-	-	1884	Schroeder, G. A.,	-	-	1884
Hopp, L. C.,	-	-	1879	Selzer, E. R.,	-	-	1885
Horst, J. H.,	-	-	1885	Sheekley, C. W.,	-	-	1881
Hull, H. M.,	-	-	1884	Sherwood, D. W.,	-	-	1885
Kaestlen, S. E.,	-	-	1887	Sherwood, H. J., Jr.,	-	-	1887
Keiper, F.,	-	-	1884	Silberling, J. H.,	-	-	1884
Keiper, L.,	-	-	1880	Slosson, F. W.,	-	-	1882
Kieffer, G.,	-	-	1880	Smithnight, A.,	-	-	1880
Kuhlmeier, H.,	-	-	1883	Snow, A. G.,	-	-	1883
Lace, J. H.,	-	-	1883	Sords, T. V.,	-	-	1885
Lane, E. B.,	-	-	1880	Spencer, Mary H.,	-	-	1883
Lehr, John,	-	-	1886	Spencer, P. I., M.D.,	-	-	1880
Lehr, P.,	-	-	1880	Spieth, W. F.,	-	-	1879
LeQuesne, H. J. N.,	-	-	1884	Springsteen, W. S.,	-	-	1885
LeQuesne, A. A. K.,	-	-	1882	Stecher, H. W.,	-	-	1883
Lohmann, O. F.,	-	-	1880	Stewart, F.,	-	-	1882
Luster, S. W.,	-	-	1883	Stoskopf, Geo.,	-	-	1884
McCoy, F.,	-	-	1882	Strock, E. E.,	-	-	1884
McIlvaine, J. J.,	-	-	1882	Strong, S. M.,	-	-	1883
May, A. F.,	-	-	1880	Stuckenholz, W.,	-	-	1883
Mayell, A.,	-	-	1879	Tielke, G.,	-	-	1885
Metcalf, L. J.,	-	-	1883	Tupa, F. J.,	-	-	1885
Meyer, W. V.,	-	-	1887	Urban, J. P.,	-	-	1880
Miller, G. H.,	-	-	1887	Weden, A. M.,	-	-	1884
Morgan, C. H.,	-	-	1880	Weichsel, E.,	-	-	1884
Mund, J. F.,	-	-	1883	Weiler, J. J.,	-	-	1881
Myers, Daniel,	-	-	1880	West, S. S.,	-	-	1879
Nemec, J. A.,	-	-	1883	Wood, A.,	-	-	1887
Newcomb, N. O.,	-	-	1884	Wright, W. C.,	-	-	1882
Norris, E. P.,	-	-	1883	Zickes, O.,	-	-	1886

Cleves, Hamilton Co.			Rauschkolb, J.,	-	-	-	1881
Grossman, F. A.,	-	-	1884	Reinert, L. Jr.,	-	-	1884
Clyde, Sandusky Co.			Richards, J. W.,	-	-	-	1886
Rabe, H. H.,	-	-	1883	Ritter, L. F.,	-	-	1887
Tiffany, H. B.,	-	-	1883	Schueller, A. W.,	-	-	1887
Coalton, Jackson Co.			Schueller, E.,	-	-	-	1879
Friedland, J. F.,	-	-	1884	Schueller, F. W.,	-	-	1880
College Corner, Butler Co.			Scott, A. C.,	-	-	-	1880
Cokefair, C. B.,	-	-	1884	Seltzer, S. T.,	-	-	1885
Huston, J. C.,	-	-	1884	Shallcross, J. H.,	-	-	1884
Columbiana, Columbiana Co.			Sherwood, L.,	-	-	-	1879
Ink, C. E.,	-	-	1884	Vogel, A. A.,	-	-	1879
Columbus, Franklin Co.			Zwerner, J. A.,	-	-	-	1880
Ackerman, J. N.,	-	-	1879	Columbus Grove, Putnam Co.			
Bauer, F. A.,	-	-	1883	Hauck, T.,	-	-	1884
Benner, C. C.,	-	-	1882	Conneaut, Ashtabula Co.			
Berger, J., Jr.,	-	-	1882	Guthrie, J. H.,	-	-	1882
Braun, H.,	-	-	1879	Kneeland, C. A.,	-	-	1883
Brodbeck, W. T.,	-	-	1883	Palmer, J. G.,	-	-	1883
Brown, W. C.,	-	-	1886	Simons, A. H.,	-	-	1885
Bruck, P. H.,	-	-	1879	Corning, Perry Co.			
Byrne, John,	-	-	1884	Foreaker, J. W.,	-	-	1883
Cook, H. C.,	-	-	1884	Covington, Miami Co.			
Cook, J. R.,	-	-	1879	Purdy, T. L.,	-	-	1884
Cornell, C. R.,	-	-	1879	Worley, G.,	-	-	1882
Edwards, E. B.,	-	-	1884	Crestline, Crawford Co.			
Gibson, C. J.,	-	-	1883	Spencer, C. A.,	-	-	1883
Harmon, M. M.,	-	-	1886	Dalton, Wayne Co.			
Herbst, F. W.,	-	-	1879	Sturgis, J. R.,	-	-	1882
Hoffman, O. L.,	-	-	1883	Sturgis, T. A.,	-	-	1883
Hollinger, Thos.,	-	-	1883	Wertz, W. H. H.,	-	-	1887
Holman, H. N.,	-	-	1883	Dayton, Montgomery Co.			
Huston, Chas.,	-	-	1879	Abbey, J.,	-	-	1882
Karb, G. J.,	-	-	1882	Abbey, W. W.,	-	-	1882
Kauffman, G. B.,	-	-	1879	Bonner, C. D.,	-	-	1887
Kolb, A.,	-	-	1882	Burkitt, J. L.,	-	-	1880
McCarter, E. N.,	-	-	1879	Burkhardt, M. A.,	-	-	1886
Mandaback, P. A.,	-	-	1887	Carnell, H. D.,	-	-	1880
*Mason, C. C.,	-	-	1884	Daugherty, J. U.,	-	-	1880
Nichols, J.,	-	-	1880	Dietz, J. C.,	-	-	1880
Nichols, J. M.,	-	-	1881	Dixon, G. M.,	-	-	1880
Ogier, W. R.,	-	-	1879	Godfrey, C. P.,	-	-	1885
Orr, W. C.,	-	-	1883	Hebner, A.,	-	-	1880

*Removed to Buchtel, O.

Hoover, Z. T., - - -	1880	East Toledo, Lucas Co.	
Hyers, W. H., - - -	1880	Bach, W. J., - - -	1880
Isaacs, B. S., - - -	1887	Cook, H. D., - - -	1882
Kalter, G. W., - - -	1887	Cook, W. S., - - -	1881
Kutchbauch, J. F., - - -	1887	Hamlin, R. F., - - -	1881
Kurfurst, H. F., - - -	1887	Elyria, Lorain Co.	
Latin, G., - - -	1880	Eady, H. J., - - -	1882
Lautenschlager, G. C., - - -	1880	Hill, F. P., - - -	1883
Pretzinger, R., - - -	1880	Park, W. H., - - -	1883
Pruden, D., - - -	1880	Roe, R. B., - - -	1887
Robertson, N. L., - - -	1881	Fayetteville, Brown Co.	
Sachs, E., - - -	1880	Fitzpatrick, S. J., - - -	1882
Spengler, J. G., - - -	1882	Findlay, Hancock Co.	
Weusthoff, O. S., - - -	1879	Black, W. R., - - -	1881
Zeller, Abia, - - -	1880	Chadwick, W. M., - - -	1883
Defiance, Defiance Co.		Haven, W. H., - - -	1880
Colby, W. D., - - -	1881	Huber, J. M., - - -	1881
Woodward, N. G., - - -	1883	Weil, J., - - -	1882
Delaware, Delaware Co.		Forest, Hardin Co.	
Aigin, S. C., - - -	1885	Dull, L. E., - - -	1885
Carter, G. H., - - -	1880	Sulliger, W. R. H., - - -	1880
Pfiffner, F. J. R., - - -	1880	Fort Jennings, Putnam Co.	
Vogt, A. L., - - -	1886	Steinhoff, A., - - -	1882
Wurtzbacher, L. H., - - -	1886	Fostoria, Seneca Co.	
Delhi, Hamilton Co.		Eshelman, L. J., - - -	1884
Carpenter, S. W., - - -	1882	Zigler, W. A., - - -	1884
Delphos, Allen Co.		Fredericksburg, Wayne Co.	
Evans, H. W., - - -	1881	Lytle, J. B., - - -	1883
Evans, J. W., - - -	1882	Fredericktown, Knox Co.	
Reul, W. W., - - -	1881	Hosach, C., - - -	1882
Sherrick, P. F., - - -	1886	Wyker, J. D., - - -	1883
Wahmhoff, J. H., - - -	1880	Fremont, Sandusky Co.	
Wahmhoff, F. S., - - -	1882	Grund, H. C., - - -	1880
Doylestown, Wayne Co.		McCulloch, R. S., - - -	1881
Hochstetler, J. C., - - -	1885	Ohler, J., - - -	1883
Dresden, Muskingum Co.		Stausmyer, C., - - -	1883
Hornung, J., - - -	1882	Thomas, E. S., - - -	1880
East Palestine, Columbiana Co.		Zimmerman, L. P., - - -	1880
Frazer, H. J., - - -	1882	Galion, Crawford Co.	
Greenamyre, E., M.D., - - -	1884	Hackedorn, M. L., - - -	1880
Sheets, G. F., - - -	1887	McClain, M. H., - - -	1880
East Springfield, Jefferson Co.		Reisinger, L. K., - - -	1881
Baird, R., - - -	1882	Spaulding, C. D., - - -	1883

Gallipolis, Gallia Co.			Hepburn, Hardin Co.		
Grayum, C. W.,	-	1887	Wood, J. M., M.D.,	-	1883
Kear, C. D.,	-	1882	Hillsboro, Highland Co.		
Robinson, W. L.,	-	1887	Davis, W. H. C.,	-	1882
Schaaf, J. H.,	-	1882	Hilton, L. R.,	-	1883
Georgetown, Brown Co.			Quinn, J. W.,	-	1880
Currey, J. N.,	-	1886	Seybert, R. L.,	-	1880
Germantown, Montgomery Co.			Smith, W. G.,	-	1880
Hildabolt, C. W.,	-	1887	Holgate, Henry Co.		
Gettysburg, Darke Co.			Turney, L. M.,	-	1881
Miller, P. B.,	-	1884	Voigt, F. H.,	-	1881
Girard, Trumbull Co.			Holmesville, Holmes Co.		
Lewis, B. G.,	-	1887	Hoy, B. F.,	-	1884
Gibsonburg, Sandusky Co.			Howard, Knox Co.		
Stilson, S. B.,	-	1881	Smith, W. H., M.D.,	-	1883
Goshen, Clermont Co.			Hubbard, Trumbull Co.		
Roudabush, D.,	-	1882	Bonnell, D. W.,	-	1884
Grand Rapids, Wood Co.			Cramer, S. P.,	-	1884
Gardner, A. J., M.D.,	-	1881	McGaughey, I. H.,	-	1885
Thurston, A.,	-	1885	Hudson, Summit Co.		
Granville, Licking Co.			Beutley, E. S.,	-	1882
Bryant, C. W.,	-	1884	Iberia, Morrow Co.		
Greenfield, Highland Co.			Crane, E. J.,	-	1884
Cleaveland, C. H.,	-	1884	Independence, Richland Co. (Butler P. O.)		
Greensburg, Trumbull Co.			Zartman, D.,	-	1884
Crane, R. W.,	-	1884	Ironton, Lawrence Co.		
Green Springs, Seneca Co.			Davies, T. C.,	-	1883
McConnell, D.,	-	1884	Strobel, J. B.,	-	1884
Skeggs, C. W., M.D.,	-	1884	Winters, A.,	-	1881
Greenville, Darke Co.			Jackson, Jackson Co.		
Kipp, W.,	-	1881	Hale, W. F., M.D.,	-	1884
Groveport, Franklin Co.			Lewis, E. D.,	-	1884
Eyman, L. E.,	-	1885	Jamestown, Greene Co.		
Hamden Junction, Vinton Co.			Ogan, F. W.,	-	1882
Lewis, A. L.,	-	1882	Strong, R. B.,	-	1880
Hamilton, Butler Co.			Jefferson, Ashtabula Co.		
Doeller, G.,	-	1883	Hawley, A. K.,	-	1883
Lehmkuhl, J. B.,	-	1887	Jeffersonville, Fayette Co.		
Schwartz, J. C.,	-	1880	Davis, C. W.,	-	1887
Hamar, Washington Co.			Junction City, Perry Co.		
Buchanan, C. R.,	-	1884	Ryan, W. J.,	-	1882
Schlaubach, E. J.,	-	1885	Kent, Portage Co.		
Hayesville, Ashland Co.			Thompson, R. A.,	-	1883
Brant, E. D.,	-	1885			

Kenton, Hardin Co.			Lorain, Lorain Co.		
Dean, W. D.,	- - -	1885	Jewitt, W. A.,	- - -	1884
McCoy, J. N.,	- - -	1879	Loramie, Shelby Co.		
Kilbourn, Delaware Co.			Quinlin, W. H.,	- - -	1884
Knapp, Delia A.,	- - -	1885	London, Madison Co.		
Kingston, Ross Co.			Atchison, J. R.,	- - -	1884
Rogers, N. P.,	- - -	1884	Robinson, E. J.,	- - -	1880
Lancaster, Fairfield Co.			Loudonville, Ashland Co.		
Beck, J. W.,	- - -	1882	Ullman, W. P.,	- - -	1881
Bellermann, J. H.,	- - -	1881	Louisville, Stark Co.		
Slocum, E. L.,	- - -	1882	Schilling, J. P.,	- - -	1885
White, E. B.,	- - -	1882	Loveland, Clermont Co.		
La Rue, Marion Co.			Shuesler, J. J.,	- - -	1882
Campbell, W. J.,	- - -	1881	McCutchenville, Wyandott Co.		
Virden, M. H.,	- - -	1883	Savidge, G. D.,	- - -	1885
Laura, Miami Co.			McConnellsville, Morgan Co.		
Shellaberger, E.,	- - -	1886	Alexander, E. V.,	- - -	1882
Lebanon, Warren Co.			Madisonville, Hamilton Co.		
Reid, H.,	- - -	1881	Klein, D.,	- - -	1882
Leetonia, Columbiana Co.			Manchester, Allen Co.		
Harper, C. B.,	- - -	1887	Peyton, W. T.,	- - -	1881
Ink, H. H.,	- - -	1886	Mansfield, Richland Co.		
Liberty Center, Henry Co.			Finrock, M. V. B.,	- - -	1882
Foncanon, G. U.,	- - -	1883	Lindsey, E. H.,	- - -	1883
Lima, Allen Co.			McCullough, A. H.,	- - -	1885
Barrere, G. W.,	- - -	1884	Miller, C. M.,	- - -	1881
Brenner, C. E.,	- - -	1886	Marietta, Washington Co.		
Gilbert, A. W.,	- - -	1885	Allen, E. H.,	- - -	1881
Harley, J. P.,	- - -	1887	Bukey, J. S.,	- - -	1884
Marmon, J. Y.,	- - -	1882	Gaitree, W. B.,	- - -	1884
Meyer, J.,	- - -	1884	Richards, E. T.,	- - -	1884
Meyer, Wm.,	- - -	1884	Styer, W. H.,	- - -	1880
Sanford, H. S.,	- - -	1882	Marion, Marion Co.		
Sanford, S., Jr.,	- - -	1882	Denison, L.,	- - -	1885
Wheeler, A. F.,	- - -	1884	*Floeken, L. H.,	- - -	1886
Young, F. H.,	- - -	1887	Hinds, J. W.,	- - -	1884
Lockland, Hamilton Co.			Hoberman, H. C.,	- - -	1883
Gilbert, H. A.,	- - -	1884	Roth, J. C.,	- - -	1884
Logan, Hocking Co.			Sweney, G. W.,	- - -	1885
Bort, L. O.,	- - -	1887	Marysville, Union Co.		
Case, F. S.,	- - -	1880	Anderson, W. P.,	- - -	1881
Harrington, F.,	- - -	1879	Field, J. W.,	- - -	1880
Reber, B. C.,	- - -	1884	Liggett, N. E.,	- - -	1881

*Correspondent for Marion Co.

Metamoras, Fulton Co.			Mt. Sterling, Madison Co.		
West, W. L., M.D.,	-	1885	Clark, C. A.,	-	1885
Massillon, Stark Co.			Mt. Vernon, Knox Co.		
Baltzley, Z. T.,	-	1882	Baker, G. R.,	-	1882
Eisenhour, C. L.,	-	1887	Baker, P. A.,	-	1883
Johnson, J. D.,	-	1882	Mt. Victory, Hardin Co.		
Kirchhofer, P. P.,	-	1882	Titworth, R. L.,	-	1884
Morganthaler, P.,	-	1883	Napoleon, Henry Co.		
Richmond, E. A.,	-	1885	Saur, J. C.,	-	1887
Mechanicsburgh, Champaign Co.			Navarre, Stark Co.		
Taylor, J. P.,	-	1886	Grossklaus, J. F.,	-	1882
Medina, Medina Co.			Nelsonville, Athens Co.		
Albro, W. H.,	-	1881	Hickman, W. G.,	-	1882
McDowell, O. H.,	-	1883	Shepherd, J. S.,	-	1883
Mendon, Mercer Co.			Nevada, Wyandot Co.		
Bevan, J.,	-	1882	Belford, Dr. E. A.,	-	1886
Miamisburg, Montgomery Co.			Goodbread, J. N.,	-	1881
Bohn, M. G.,	-	1880	Williams, E. R.,	-	1883
Middletown, Butler Co.			Newark, Licking Co.		
Johnson, C. B.,	-	1884	Collins, F. A.,	-	1880
Johnson, W. H.,	-	1886	Jones, W. C.,	-	1881
Reed, E. M. Ph. C.,	-	1880	Patton, J. G.,	-	1885
Tyson, A. D.,	-	1887	New Bremen, Auglaize Co.		
Weistbrodt, G.,	-	1884	Hoffman, J. L.,	-	1881
Middle Point, Van Wert Co.			New Burlington, Clinton Co.		
White, W. E.,	-	1887	Collett, O. F.,	-	1884
Milan, Erie Co.			New Carlisle, Clark Co.		
Walker, F. A.,	-	1885	Neff, C. H.,	-	1882
Milford, Clermont Co.			Neff, B., M.D.,	-	1887
Vortkamp, H. F.,	-	1884	New Concord, Muskingum Co.		
Millersburg, Holmes Co.			Johnson, C. S.,	-	1882
Strome, J. J.,	-	1882	New Holland, Pickaway Co.		
Mineral, Athens Co.			Morris, W. E.,	-	1884
Coleman, J. C.,	-	1885	New Lexington, Perry Co. (Highland P.O.)		
Mineral Ridge, Trumbull Co.			Bonar, R. S.,	-	1884
Lynn, G. A.,	-	1886	New Lexington, Perry Co.		
Minerva, Stark Co.			McDonald, S. S.,	-	1886
Hoopes, W. W.,	-	1884	Taggart, P. S.,	-	1885
Minster, Auglaize Co.			New Lisbon, Columbiana Co.		
Rulmann, R. A.,	-	1884	Brown, F. A.,	-	1883
Morristown, Belmont Co.			Deemer, C. H.,	-	1883
Fisher, J. V.,	-	1882	New London, Huron Co.		
Mt. Gilead, Morrow Co.			Starbird, B. F.,	-	1884
Swingle, J. L.,	-	1880	Starbird, C.,	-	1884

New Richmond, Clermont Co.			Portsmouth, Scioto Co.		
Fleher, J. C.,	-	1881	Amann, C. E., Sr.,	-	1881
Moss, J. W.,	-	1882	Amann, C. E., Jr.,	-	1881
New Straitsville, Perry Co.			Amann, F.,		
Spencer, H.,	-	1884	Reed, E.,	-	1881
Newton Falls, Trumbull Co.			Port Clinton, Ottawa Co.		
Carlisle, F. L.,	-	1884	Payne, C. E.,	-	1886
Rice, B. F.,	-	1883	Port Washington, Tuscarawas Co.		
New Waterford, Columbiana Co.			Cornet, L. A.,	-	1882
Vollnogle, P. F.,	-	1884	Cornet, G. A.,	-	1887
North Amherst, Lorain Co.			Powhatan Belmont Co.		
Rockwood, C. H.,	-	1887	Beane, J. H.,	-	1887
North Ridgeville, Lorain Co.			Prairie Depot, Wood Co.		
Terrell, E.,	-	1888	Sage, J. R.,	-	1884
Norwalk, Huron Co.			Prospect, Marion Co.		
Benedict, D. D., M.D.,	-	1880	Cook, F. M.,	-	1886
Patrick, M.,	-	1883	Ravenna, Portage Co.		
Orrville, Wayne Co.			Waterman, H.,	-	1884
Blankenhorn, H.,	-	1884	Richmond, Jefferson Co.		
Ottawa, Putman Co.			Pyle, S. B.,	-	1882
Graham, A., Jr.,	-	1886	Walker, J. F.,	-	1884
Kelley, W. W.,	-	1881	Republic, Seneca Co.		
Oxford, Butler Co.			Charles, X. F.,	-	1886
Gillard, W. H.,	-	1884	Deutler, S. S.,	-	1886
Richey, S. C.,	-	1884	Richwood, Union Co.		
Painesville, Lake Co.			Conkright, A. B.,	-	1886
Werner, W. M.,	-	1886	Hill, C. E.,	-	1884
Paulding, Paulding Co.			Ripley, Brown Co.		
Porter, F.,	-	1886	Black, C. T.,	-	1885
Pemberville, Wood Co.			Maddox, W. E.,	-	1884
Sprague, L. C.,	-	1882	Maddox, W.,	-	1884
Perrysburg, Wood Co.			Rocky Ridge, Ottawa Co.		
Champney, A. R.,	-	1881	Barringer, D., M.D.,	-	1885
Champney, W. R.,	-	1881	Roseville, Muskingum Co.		
(Philo P. O.) Taylorsville, Muskingum Co.			Taylor, J. D.,	-	1882
Richter, S. F.,	-	1882	Rushsylvania, Logan Co.		
Piqua, Miami Co.			Doran, I. A.,	-	1886
Wilson, A. C.,	-	1880	St. Clairsville, Belmont Co.		
Plymouth, Richland Co.			Hoge, J. B.,	-	1882
Webber, T. J.,	-	1885	Patterson, J. A.,	-	1882
Pomeroy, Meigs Co.			Patterson, J. J.,	-	1882
Reed, C. D.,	-	1882	West, J. E., M.D.,	-	1882
Seebohm, A. W.,	-	1881			

St. Mary's, Auglaize Co.			Stahl, H.,	-	-	1883
Hauss, J. J.,	-	1886	Thompson, H. W.,	-	-	1881
St. Paris, Champaign Co.			Smithville, Wayne Co.			
Fiedler, G. W.,	-	1884	Willaman, F. P.,	-	-	1884
Salem, Columbiana Co.			Somerset, Perry Co.			
Bolger, J. C.,	-	1883	Clayton, E. P.,	-	-	1882
DeRhodes, F.,	-	1885	South Charleston, Clarke Co.			
French, L. B.,	-	1883	Hudson, W. J.,	-	-	1882
Hawkins, M. S.,	-	1880	Luckey, G. W.,	-	-	1884
Trimble, R. P.,	-	1884	Rees, J. N.,	-	-	1886
Salineville, Columbiana Co.			Spencerville, Allen Co.			
McGill, W. W.,	-	1883	Beard, J. M.,	-	-	1885
McKean, C. W.,	-	1884	Judd, O. S.,	-	-	1882
Sandusky, Erie Co.			Springfield, Clarke Co.			
Arnold, D. R.,	-	1884	Bakhaus, A.,	-	-	1882
Biehl, L. A.,	-	1884	Beck, J. I.,	-	-	1886
Dick, C.,	-	1885	Burton, G. F.,	-	-	1880
Emrich, J. H.,	-	1885	Casper, T. J., M.D.,	-	-	1879
Hauser, J. C.,	-	1881	Coblentz, F. H.,	-	-	1886
Henkelman, H. K.,	-	1884	Coblentz, G.,	-	-	1887
Lehrer, C. A.,	-	1881	Coblentz, V.,	-	-	1882
Melville, W. M.,	-	1884	Goebel, C. W.,	-	-	1886
Pape, Josephine,	-	1885	Heister, U. S.,	-	-	1887
Phleger, W. F.,	-	1885	Holloway, W. G.,	-	-	1887
Wildenthaler, G. A.,	-	1884	Kuqua, S. J.,	-	-	1886
Sardinia, Brown Co.			Lisle, J. D., M.D.,	-	-	1884
Glenn, A. H.,	-	1882	Ludlow, C.,	-	-	1880
Seville, Medina Co.			Montanus, P. E.,	-	-	1882
Boise, J. C.,	-	1887	Nelson, J. W., M.D.,	-	-	1887
Leitzell, A. D.,	-	1885	Ridgway, C. M.,	-	-	1886
Shane's Crossing, Mercer Co.			Roberts, C. A.,	-	-	1882
Wisterman, I.,	-	1885	Schmidt, A.,	-	-	1886
Shauck's P. O., Morrow Co.			Smith, C. A.,	-	-	1880
Thuma, J. W.,	-	1884	Smith, W. I.,	-	-	1882
Shelby, Richland Co.			Troupe, Theo.,	-	-	1880
Melsheimer, E. J.,	-	1883	Valentine, F. E.,	-	-	1886
Peters, V. O.,	-	1885	Staubenville, Jefferson Co.			
Shiloh, Richland Co.			Beall, W. M.,	-	-	1884
Fenner, J. C.,	-	1883	Beany, W. W.,	-	-	1884
Shreve, Wayne Co.			Burgoyne, W. R.,	-	-	1884
Cunningham, J. C.,	-	1884	Carnahan, J.,	-	-	1882
Sidney, Shelby Co.			Carnahan, W. G.,	-	-	1884
Amann, C.,	-	1881	Foley, J. B.,	-	-	1884
Amann, F. O.,	-	1884	Foster, A. M.,	-	-	1884

Johnson, J. M.,	-	-	1884	Peck, E. D.,	-	-	-	1881	
Johnson, T.,	-	-	1882	Roller, J. L.,	-	-	-	1881	
Johnson, W. R.,	-	-	1887	Reed, I. N.,	-	-	-	1881	
Kells, H. B.,	-	-	1884	Schaefer, M. B.,	-	-	-	1881	
Lickes, R. P.,	-	-	1884	Spayd, C. E.,	-	-	-	1881	
Long, W. A.,	-	-	1882	Spohn, R. C.,	-	-	-	1881	
Miller, L. A.,	-	-	1884	Swan, W. S.,	-	-	-	1881	
Morrison, R. J.,	-	-	1884	Taylor, U. B.,	-	-	-	1883	
Ridgley, W. F.,	-	-	1884	Vanstone, T.,	-	-	-	1881	
Steele, C. H.,	-	-	1884	Walding, W. J.,	-	-	-	1881	
Steele, E. M.,	-	-	1884	West, C.,	-	-	-	1881	
Stewart, H. W.,	-	-	1884	West, W. K.,	-	-	-	1881	
Summerfield, Noble Co.				Toronto, Jefferson Co.					
Dew, J. T.,	-	-	1882	Pugh, G. C.,	-	-	-	1884	
Swanton, Fulton Co.				Troy, Miami Co.					
Price, A. Q.,	-	-	1886	Parsons, G. F.,	-	-	-	1880	
Sylvania, Lucas Co.				Tobey, C. W.,					1879
Hank, T. B., M.D.,	-	-	1884	Uhrichsville, Tuscarawas Co.					
Tiffin, Seneca Co.				Francis, H. S.,					1882
Fleck, J. J.,				Unionport, Jefferson Co.					
Hubbard, E. B.,	-	-	1884	Dunlap, G. G.,	-	-	-	1884	
Marquardt, J. F.,	-	-	1881	Lyle, J. P., M.D.,	-	-	-	1886	
Smith, W. P., Jr.,	-	-	1883	Upper Sandusky, Wyandot Co.					
Warner, A. C.,	-	-	1885	Altenberger, P. J.,	-	-	-	1887	
Witschner, M. G.,	-	-	1884	Berg, F.,	-	-	-	1880	
Tiro, Crawford Co.				Tschanen, G. W.,					1882
Jeffrey, D. G.,	-	-	1883	Tschanen, W.,	-	-	-	1883	
Jeffrey, F. M.,	-	-	1883	Von Stein, J. H.,	-	-	-	1879	
Toledo, Lucas Co.				Urbana, Champaign Co.					
Bartlett, W.,	-	-	1881	Colwell, J. M.,	-	-	-	1880	
Bower, F. T.,	-	-	1881	Connor, J. O.,	-	-	-	1882	
Buckwell, A. J.,	-	-	1881	Cramer, G. W.,	-	-	-	1881	
Burger, A.,	-	-	1881	Fisler, I.,	-	-	-	1882	
Cheney, F. J.,	-	-	1881	Luce, J. D.,	-	-	-	1885	
Crosby, C. M.,	-	-	1881	Sullivan, E. M.,	-	-	-	1885	
Danforth, E. C.,	-	-	1881	Van Wert, Van Wert Co.					
Daniels, Thos.,	-	-	1881	Gackenhaimer, L. F.,	-	-	-	1882	
Frazer, G. M.,	-	-	1883	Gackenhaimer, M. U.,	-	-	-	1886	
Friedrich, J. F.,	-	-	1887	Hines, J. A.,	-	-	-	1887	
Fisher, G. H.,	-	-	1881	Noell, C. H.,	-	-	-	1882	
Gysel, R.,	-	-	1881	Vermillion, Erie Co.					
Heitzman, A.,	-	-	1881	Baumhart, C. C.,	-	-	-	1887	
Heydrich, L.,	-	-	1881	Versailles, Darke Co.					
Nye, D. H.,	-	-	1881	Stierle, J. G.,	-	-	-	1885	

Wadsworth, Medina Co.			Smith, E. D. F.,	-	-	1884
Curtis, C. A.,	-	-	Smith, E. T.,	-	-	1884
Ross, J. D.,	-	-	West Salem, Wayne Co.			
Wapakoneta, Auglaize Co.			Gable, D.,	-	-	1883
Franke, A.,	-	-	Kiplinger, J. W.,	-	-	1884
Fuelling, D.,	-	-	Morr, T. N.,	-	-	1883
Kayser, Wm.,	-	-	West Unity, Williams Co.			
Warsaw, Coshocton Co.			Denman, W. M.,	-	-	1884
Lawson, D. J.,	-	-	Wharton, Wyandot Co.			
Washington Court House, Fayette Co.			Clark, S. L.,	-	-	1883
Boyer, H.,	-	-	Cole, C. W.,	-	-	1884
Brown, T. F.,	-	-	Ireman, J. W.,	-	-	1883
Donnan, E. V.,	-	-	White House, Lucas Co.			
Ellis, T. B.,	-	-	Heath, F. M.,	-	-	1881
Murray, S. W.,	-	-	Williamsburg, Clermont Co.			
Washingtonville, Mahoning Co.			Beall, A.,	-	-	1882
Walker, W. P.,	-	-	Willoughby, Lake Co.			
Watertown, Washington Co.			Law, G. F.,	-	-	1885
Bohl, Conrad,	-	-	Wilmington, Clinton Co.			
Wauseon, Fulton Co.			Brown, G. W.,	-	-	1885
Collins, E. A.,	-	-	Foland, D. J.,	-	-	1881
Nachtrieb, C. J.,	-	-	Stumm, R. C.,	-	-	1885
Read, J. A.,	-	-	Taylor, F. S.,	-	-	1885
Read, M. E.,	-	-	Wilshire, Van Wert Co.			
Waverly, Pike Co.			Piercy, C. G.,	-	-	1885
Adams, A. A.,	-	-	Wilmot, Stark Co.			
Blaser, J. T.,	-	-	Spidell, C. E.,	-	-	1884
Dean, A. H.,	-	-	Wolf, C. P., M.D.,	-	-	1884
Hutt, P.,	-	-	Winchester, Adams Co.			
Wellington, Lorain Co.			Doyle, S.,	-	-	1884
Felt, F. D.,	-	-	Woodville, Sandusky Co.			
West Alexandria, Preble Co.			Busch, A.,	-	-	1884
Davis, J. E.,	-	-	Busch, H., M.D.,	-	-	1883
West Jefferson, Madison Co.			Carey, M. J., M.D.,	-	-	1885
Bradley, Quin,	-	-	Wooster, Wayne Co.			
West Liberty, Logan Co.			Boyd, S. H.,	-	-	1886
Gill, D. W.,	-	-	Donnelly, F. H.,	-	-	1883
Maxwell, G. F.,	-	-	Laubach, G. R.,	-	-	1883
West Manchester, Preble Co.			Ohliger, L. P.,	-	-	1884
Overholser, S. H.,	-	-	Roller, R. S.,	-	-	1883
West Mansfield, Logan Co.			Zimmerman, J.,	-	-	1884
Moore, J. C.,	-	-	Zimmerman, J. R.,	-	-	1884
West Richfield, Summit Co.			Xenia, Greene Co.			
Haeefe, G. L., M.D.,	-	-	Farrell, H. J.,	-	-	1886

Fleming, E. C., - - - 1880

McCormick, J. T., - - - 1884

Yellow Springs, Greene Co.

Ridgway, C., - - - 1879

Youngstown, Mahoning Co.

Averbeck, M. J., - - - 1883

Hall, C. F., - - - 1882

Krauter, C. H., - - - 1887

McKeown, S. W., - - - 1884

Zanesville, Muskingum Co.

Baush, K. M., - - - 1881

Chappelear, F. B., - - - 1882

Graham, C. V., - - - 1882

Graham, W. H., - - - 1881

Hatton, E. M., - - - 1880

Johnson, J. R., - - - 1882

Nye, H. L., - - - 1882

Peters, D. Z., - - - 1880

Weller, W. A., - - - 1880

Wells, W. P., - - - 1881

Widney, H. M., - - - 1883

CALIFORNIA.

Los Angeles.

Buehler, J. J., - - - 1887

San Francisco, 319 California St.

Rosenfeld, E. A., - - - 1884

Stockton.

Sanford, J. A., - - - 1880

COLORADO.

Salida.

Thurber, A. R., - - - 1883

ILLINOIS.

Rock Falls, White Side Co. (Box 393.)

Flexer, A. W., - - - 1885

Teutopolis, Effingham Co.

Schiml, A. J., - - - 1880

INDIANA.

Peru.

Leist, J. L., Ph. C., - - - 1880

Plymouth, Marshall Co.

Hoyt, C. H., - - - 1882

IOWA.

Clinton.

John, J. M., - - - 1881

KANSAS.

Lyons, Rice Co.

Magoffin, A. E., - - - 1881

KENTUCKY.

Louisville, 4th and Market Sts.

Pardick, B. J., - - - 1884

Schmuck, F. E., 840 Baxter Ave., 1880

Preston, cor. Broadway.

Schneider, A. W., - - - 1886

MAINE.

Cumberland Mills.

Starr, H. G., - - - 1883

MARYLAND.

Baltimore.

Roy, A. H., - - - 1881

MISSOURI.

Peirce City.

Armstrong, G. R., - - - 1879

NEBRASKA.

Omaha.

Holman, J. H., - - - 1883

NEW YORK.

New York City, 338 Broadway.

Reuter, W., - - - 1881

Jamestown.

Dronberger, L. R., - - - 1882

PENNSYLVANIA.

Philadelphia, 2d and Poplar Sts.

Bohn, C. H., Ph. G., - - - 1880

Pittsburgh, 300 Frankstown Ave.

Shrimplin, L. D., - - - 1883

Sewickly.

John W. Edwards, - - - 1886

CHINA.

Philander Smith Memorial Hospital, Nanking.

Beebe, R. C., M.D., - - - 1882

DECEASED.

		Elected.	Deceased.
Adolph, A	Columbus	1881	1883
Andress, J. E.	Berlin Heights	1885	1886
Baush, W. F.	Zanesville	1882	1886
Benedict, J. I.	Cleveland	1880	1884
Bixel, E.	Cleveland	1880	188n
Blocksom, H. W.	Zanesville	1881	1882
Boltman, C. J.	Mansfield	1884	1884
Bryant, E. D.	Circleville	1884	1886
Cleveland, J. S.	Burton	1883	1884
Cobleatz, J. P.	Springfield	1880	1883
Conwell, E. T.	Cleveland	1883	1885
Dover, Thos.	Dayton	1880	1881
Doyle, C. H.	Chillicothe	1880	1883
Faust, C.	Cincinnati	1879	1886
Fennel, A.	Cincinnati	1880	1884
Fleming, E. M.	Miamisburg	1880	1804
Foote, N. W.	Wellington	1883	1883
Goehring, Phil	Ricewood	1882	1883
Hickox, L. A.	Akron	1882	1883
King, A. P.	London	1880	1882
Kistners E. C.	Cincinnati	1884	1886
Lawyer, L.	Milford	1883	1885
Leick, R. H.	Cleveland	1884	1885
Limb, A. A.	Akron	1883	1885
McClun, C. M.	Columbiana	1885	1885
Miller, H. L.	Pittsburgh, Pa.	1882	1886
Minear, A. W. S.	Athens	1885	1886
Muntell, H.	Cincinnati	1884	1885
Neuhart, L. A.	Caldwell	1882	1883
Nicolay, S. J.	Hamilton	1882	1887
Plymire, L. E.	Sabina	1882	1883
Rehfus, C. A.	Lima	1882	1886
Reum, H. F.	Cincinnati	1881	1886
Sherrick, P. F.	Delphos	1886	1868
Smith, A.	London	1889	1882
Spayd, G. H.	Toledo	1881	1884
Steiner, M. B.	Kenton	1881	1882
Thayer, G. M.	Toledo	1881	1885
Uthe, J. F.	North Amherst	1884	1889
Wagner, A.	Cincinnati	1882	1886
Wines, F. E.	Vermillion	1885	1886
Wolfe, H. H.	Springfield	1881	1884

RESIGNED.

		Elected.	Resigned.
Buell, W. H.....	Marietta.....	1881	1886
Dolph, W. H.....	Elmore.....	1884	1885
Everette, E. S.....	Portland, Me....	1880	1884
Glaser, C. H.....	Norwalk.....	1881	1876
Heister, L.....	Cincinnati.....	1880	1885
Heister, E. M.....	Cleveland.....	1880	1889
Hoyt, H. H.....	North Fairfield.....	1882	1886
Jones T. A.....	Venedocia.....	1882	1886
Lee, E. S.....	Roscoe.....	1882	1886
Lippert, O. C. F.....	Cincinnati.....	1880	1882
Merrell, A. H.....	Cincinnati.....	1884	1886
Seymour, F. W.....	Wheeling, W. Va.....	1881	1887
Weichsel, F.....	Cleveland.....	1881	1886
West, C. W.....	Toledo.....	1881	1884

DROPPED FROM THE ROLL

FOR NON-PAYMENT OF DUES.

Elected.	Elected.
Allen, C. S., Cleveland.....1880	Lyon, C. W., Spring Valley.....1880
Allen, J., Montpelier.....1880	McComley, R. K., Bridgeport.....1882
Allen, E. H., Eaton.....1880	McLaughlin, J. D., Butler.....1882
Aknoyed, W., Dresden.....1882	Myers, F. W., East Liverpool.....1880
Arick, C. V., Newark.....1882	Myers, J. A., East Liverpool.....1880
Arthur, W., Columbus.....1882	Newhart, D., Jr., Caldwell.....1882
Backus, J. A., Grand Rapids.....1881	Newlove, B., Marysville.....1879
Baker, W. A., Urbana.....1883	Nickerson, C. L., Lima.....1883
Binkerd, A. W., Lima.....1880	Page, F. D., Tiffin.....1884
Bittner, G. C., Toledo.....1881	Pearce, L. McArthur.....1883
Byrnes, R. M. M. D., Cincinnati.....1879	Richards, A. J., Marietta.....1881
Chapman, W. C., Toledo.....1881	Roberts, L., Stoutsville.....1882
Clark, W. T., Willoughby.....1883	Ruff, W., St. Paul, Minn.....1881
Coblentz, C., Cleveland.....1879	Samules, S. E., Columbus.....1879
Compton, J. E., Coshocton.....1882	Scarborough, E. W., Cincinnati.....1881
Conly, J. J., Great Bend, Ind.....1880	Schuerman, F., Cincinnati.....1881
Conner, G. W., Xenia.....1880	Schultz, B. F., Kenton.....1881
Cromwell, G. O., Mansfield.....1881	Scribner, J. J., Mt Vernon.....1880
Darrah, J. E., Fargo.....1882	Shaw, J., Zanesville.....1882
Davies, E. E., Milwaukee, Wis.....1880	Shinn, E., Dayton.....1880
Deems, W. C., Columbus.....1883	Siddall, E. E., Findlay.....1882
Dietrich, J. W., Carthage, Mo.....1880	Sipe, W. F., Sarahsville.....1882
Eysenbach, H. P., Delphos.....1882	Slater, J. W., Ironton.....1881
Gardner, R. H., Columbus.....1881	Smith, L., Xenia.....1880
Gore, H. W., Salem.....1883	Somers, H., Canton.....1881
Gossler, T. J., London.....1882	Spayde, W. H., Helena.....1881
Grand, Girard, H. E., Circleville.....1881	Stinchcomb, C. L., Canton.....1882
Hays, J. S., Chicago, Ill.....1883	Thomas, C. F., Cincinnati.....1880
Hirst, J. J., Yellow Springs.....1879	Troll, C. W., St Clairsville.....1871
Hirst, T. C., Yellow Springs.....1879	Van Law, J. D., Bellaire.....1889
Hoglin, Phil., Newcomerstown.....1881	Van Loon, W. C., Cincinnati.....1881
Irwin, C. L., Mansfield.....1881	Vaupel, C. P., Cleveland.....1880
Jones, E. C., South Charleston.....1880	Wetzel, G. H., Lancaster.....1882
Lewis, J. E., Troy.....1880	Zimmer, F. P., Omaha, Neb.....1882

Total number of Active Members elected,	1,082
Number of Deaths,	42
Number of Resignations,	13
Number Dropped from Roll	68
Number of Members out of the State,	22
	145
Total Membership in the State,	937

LIST OF PHARMACISTS

Registered in 1884. Re-registered in 1887.

0894	Abbey, J.	Dayton	1649	Andrews, R. S.	Seal
0466	Abbey, W. J.	Dayton	2158	Andrews, John A.	Carthage
2009	Abbott Lafayette.	Clearport	0710	Andrews, W. C.	Cortland
0474	Acker, P.	Cleveland	1683	Angier, A. E.	Columbus
0650	Ackermann, J. N.	Columbus	2555	Anliker, Otto E.	Toledo
1487	Ackerman, P. J.	Columbus	0376	Aplin, C. F.	Carbon Hill
0672	Ackley, I. L.	Oakwood	0222	Armour, E. E.	Chagrin Falls
0784	Adams, A. A.	Waverly	1794	Armstrong, L. L.	Cincinnati
1441	Adams, E. C.	Elyria	1100	Armstrong, P. M.	New Lisbon
1626	Adams, E. W.	Wellington	1090	Arnold, D. R.	Sandusky
1976	Adams, J. H.	Fort Recovery	1430	Arnold, G. L.	Cambridge
1975	Adams, J. F.	Fort Recovery	1431	Arnold, Maud.	Cambridge
0900	Adams, Louise M.	Warren	1909	Arnold, J. P.	Lore City
0051	Adams, N. B.	Belpre	1732	Ash, L. B.	Ashland
0271	Adams, W. H.	Cincinnati	0914	Asher, J. H.	Sedalia
0371	Adderley, W. H.	Cincinnati	0739	Ashton, A. S.	Piqua
0350	Adsit, Orson.	Sylvania	0741	Ashton, D. T.	Piqua
1774	Ailer, J. F.	New Washington	0740	Ashton, W. B.	Piqua
0745	Akeroyd, Wm.	Dresden	1619	Ashton, E.	Lima
0333	Aldrich, D. L.	Weston	2067	Asplin, John H.	Cleveland
0655	Aldrich, F. J.	Rising Sun	0243	Atkinson, F. A.	Cadiz
1540	Aldridge, John D.	Sarahsville	0984	Atchison, J. R.	London
0251	Albert, L. A.	Jamton	2090	Austin, E. L.	Plymouth
0088	Albro, W. H.	Medina	1713	Austin, George.	Celina
1898	Allen, A. A.	Toledo	1207	Austin, W. C.	Geneva
0279	Allen, E. H., Jr.	Marietta	0105	Axline, A. A.	Fultonham
0120	Allen, John E.	Columbiana	0056	Axline, C. E.	Lancaster
0669	Allen, F. L.	Kent	0662	Ayers, H. C.	Sidney
1819	Allen, Thos. M.	Portland	1943	Ayers, James M.	Cincinnati
1514	Allen, John R.	Mt. Oreb	0052	Ayers, Mary A.	Cincinnati
1695	Allen, S. E.	Akron	0798	Bach, W. J.	East Toledo
1030	Alexander, C. C.	Cleveland	2103	Bahrenburg, C. H.	Marion
1694	Alexander, W. W.	Akron	0848	Bailey, A. D.	Ridgeway
1084	Alexander, John, McConnellsville		1668	Bailey, F. P.	Zanesville
0982	Althaus, Henry.	Taylor's Creek	0250	Bailey, Geo.	East Toledo
0209	Althaus, Fred., Jr.	Taylor's Creek	1584	Bailey, John C.	Pioneer
0280	Amann, C.	Sidney	1583	Bailey, S. L.	Pioneer
1045	Amann, C. E., Sr.	Portsmouth	2535	Bailey, Wheeler J.	Columbus
0554	Amann, Frank.	Portsmouth	1669	Bailey, Willis.	Zanesville
1599	Anderson, Chas. E.	Coshocton	1867	Bailey, Wm. N.	East Liverpool
1600	Anderson, John.	Coshocton	1351	Baird, C. C.	Pataskala
1776	Anderson, W. P.	Marysville	1350	Baird, H. H.	Pataskala
1775	Anderson, John W.	Marysville	1352	Baird, Joseph.	Pataskala
2150	Anderson, Leroy K.	Coshocton	0329	Baird, J. H.	Pataskala
0491	Anderson, J. W.	Urbana	2075	Baird, Robt.	East Springfield
1397	Anderson, R. R.	Mowrystown	0834	Baker, B. F.	St. Paris
1476	Andrews, A. H.	Duption	1321	Baker, D. W.	Columbus

0328	Baker, George R....Mt. Vernon	2050	Beile, C. F.....Cincinnati
1154	Baker, P. A.....Birmingham	1164	Belding, E. C.....Ravenna
0143	Baker, P. A.....Mt. Vernon	0428	Belford, H. P.....Granville
0558	Baker, R. F.....Thornville	2191	Bell, J. C.....Stafford
1078	Bakhaus, Adolph....Springfield	0556	Benedict, A. E.....Utica
1944	Bakhaus, Edmund....Cincinnati	1637	Benedict, D. D.....Norwalk
1267	Baldwin, Frank M..Blanchester	1908	Benner, Charles C....Columbus
0927	Ball, T. B.....Ironton	2053	Benner, Pedro.....Cincinnati
0499	Ball, W. F.....Niles	0835	Bennett, La Roy S....Lithopolis
1864	Ballard, W. A....Greenville	1950	Bentley, Edwin S.....Hudson
0930	Balsley, W. F.....Napoleon	1040	Berg, Fred....Upper Sandusky
0276	Baltzley, Z. F.....Massillon	0176	Berger, A.....Toledo
2063	Bankson, Elliot.....Edon	0089	Berger, E. L.....Crestline
1383	Banter, George W..Koogle P. O	0114	Berger, Jos., Jr.....Columbus
0750	Barnes, F. A.....Austinburg	0022	Bertolett, E. E.....Shreve
1448	Barnes, W. W.....Austinburg	2529	Berube, Louis N.....Glendale
1071	Barnes, Fred J.....Painesville	0449	Betz, Otto E.....Cincinnati
0658	Barnett, J. N.....Rix's Mills	0067	Bevan, John.....Mendon
1079	Barr, J. D.....Marshall	0195	Bevard, Henry...Canal Fulton
1698	Barr, P. H.....Canton	2159	Beyerle, G. Wm.....Cleveland
0443	Barr, Sam'l E.....Canton	1066	Biehl, Lewis A.....Sandusky
0837	Barret, B. S.....Rutland	2560	Biddle, H. G.....Cleveland
0397	Barringer, D...Rocky Ridge	2089	Billhardt, A....Upper Sandusky
0555	Barry, T. M.....Fayetteville	1972	Binckley, G. S.....Kenton
1693	Bartholomew, A. U....Vienna	1971	Binckley, J. W.....Kenton
1767	Bartholomew, M. S.New Holland	1299	Bingel, Albert.....Cincinnati
1566	Bartlett, J. A.....Cleveland	1757	Bixby, Jerome.....Castalia
1719	Bartlett, G. W.....Toledo	0711	Black, B. H.....Freeport
1720	Bartlett, Wm.....Toledo	0978	Black, C., Jr.....Grovesport
1004	Barton, Chas. E.....Norwalk	1163	Black, L. K.....Akron
1595	Barton, James.....Mansfield	0486	Black, W. R.....Findlay
1596	Barton, Will M.....Mansfield	0199	Blackburn, A. W.....Wooster
1605	Barton, T. H.....Syracuse	1097	Blake, H. B.....Sidney
1580	Bates, R. C.....Willoughby	2023	Blakemore, J. W....Winchester
2522	Bauer, Frank A.....Columbus	0883	Blankenhorn, B.....Orrville
0227	Bauer, John.....Cincinnati	0824	Blaser, Jas. T.....Waverly
1012	Baumgart, Mrs. J. A....Lorain	0755	Blass, Charles.....Cleveland
0095	Baumgartner, F.....Chillicothe	1411	Bleckner, Wm....Oak Harbor
1680	Baush, K. M.....Zanesville	2166	Bleher, J. C....New Richmond
1417	Baxter, Minerva J.....Irondale	1189	Bliss, C. C.....Delphos
0005	Beall, Alexander..Williamsburg	1844	Block, John....West Alexandria
2017	Beall, John.....Cadiz	1696	Blocker, H. C.....Akron
1006	Beall, John A.....Cadiz	1787	Blood, James C.....Franklin
1450	Beall, W. M.....Steubenville	1334	Blum, F. Jr.....Canton
0421	Beam, J. H....Powhatan Point	0754	Blythe, Catharine...Owensville
2072	Beany, W. W.....Steubenville	0947	Bock, A. W.....Cleveland
1738	Beard, J. M.....Spencerville	1300	Boehmer, A. L.....Cincinnati
0100	Beardsley, W. P....Bainbridge	1363	Boehme, Chas. E..Germantown
0254	Beck, John W.....Lancaster	0011	Bohl, Conrad.....Watertown
2101	Beckel, Geo. W.....Defiance	0747	Bohn, J. H.....Camden
0897	Beckman, Fred G....Delphos	0557	Bohn, M. G.....Miamihurst
2157	Beecher, E. N.....Bellevue	0073	Boise, James C.....Seville
1556	Beeler, John L.....Hamilton	0071	Bolger, J. C.....Salem
1557	Beeler, S. L.....Hamilton	1999	Bolks, J. D....Bowling Green
2172	Beeman, J.....Cleveland	1392	Bonar, R. S.....Highland P. O

1046	Bond, B. F.....	Vermillion	1022	Bryan, E. H.....	Ironton
0999	Bonnell, D. W.....	Hubbard	0275	Buchanan, C. R.....	Harmon
0949	Bonner, Calvin A.....	Dayton	1149	Buckland, Ralph P., Jr..	Fremont
1500	Bood, J. F.....	Bolivar	1150	Buckland, S.....	Fremont
1360	Borden, Joseph.....	Blackcreek	2537	Buckwell, A. J.....	Toledo
1986	Bowles, F. O.....	Laydsville	1370	Buell, Wm.....	Akron
0748	Bossert, O.....	Washingtonville	1640	Buell, Wm. H.....	Marietta
0141	Bostwick, N. B.....	Newark	2102	Buffington, J. P.....	Defiance
2109	Boswell, Edwin.....	Cincinnati	1833	Bunn, James W.....	West Union
0992	Bott, J. H.....	Shawnee	0832	Bunn, John.....	Batavia
0181	Bowdle, J. A.....	Pleasant Bend	1298	Burdsal, Samuel.....	Cincinnati
2511	Bower, F. T.....	Toledo	1125	Burgoynne, W. R.....	Steubenville
2108	Bowers, C. C.....	Port Williams	1671	Burket, Geo. W.....	Rawson
0425	Bowie, A. T.....	Bridgeport	1216	Burky, Jacob.....	Shanesville
0273	Boyer, Harry.....	Washington C. H	0591	Burnett, J. C.....	Sabina
0912	Boyer, J. M.....	London	0592	Burnett, T. M.....	Sabina
0759	Bracelin, Henry.....	Bluffton	1437	Burns, B. F.....	Findlay
1835	Braddock, M. J.....	Somerset	0311	Burris, C. V.....	Danville
2163	Bradley, Quinn.....	West Jefferson	2131	Burson, G. W.....	Waynesburgh
2111	Brainerd, C. W.....	Mantua Station	1664	Burson, S. M.....	Hanoverton
0684	Brand, C. W.....	Mt. Blanchard	1706	Burtch, A. W.....	Greenwich
0388	Brant, E. D.....	Hayesville	1707	Burtch, Chas. E.....	Greenwich
0987	Brandt, J. H.....	Lucasville	1937	Burton, G. F.....	Springfield
0852	Brant, J. W.....	Hayesville	1579	Burton, W. H.....	Harbor
2534	Braun, Carl L.....	Columbus	1081	Rusch, A.....	Woodville
0799	Braun, Herman.....	Columbus	1325	Busch Ed. M.....	Elyria
1052	Breckenridge, B. F.....	Kipton	1082	Busch, H.....	Woodville
1907	Brede, J. H.....	Middletown	2006	Burkitt, John L.....	Dayton
0036	Breese, A. H.....	Mt. Gilead	0520	Butler, Frank.....	Bellefontaine
0037	Breese, J. M.....	Mt. Gilead	1123	Buttemiller, J. C.....	Cincinnati
1122	Brehm, L. C.....	Cincinnati	0306	Buxton, H. J.....	Johnstown
0145	Brenneman, J. R.....	Elida	1634	Byrne, John.....	Columbus
0316	Brenneman, J. W.....	Lindsey	2160	Byers, H. M.....	Sycamore
1231	Briggs, E.....	Cuba	2076	Byers, Benjamin.....	Vigo
0019	Briggs, Frank.....	Delta	2082	Byard, D. R.....	Warren
1233	Briggs, W. H.....	Mt. Gilead	2514	Byrider, John.....	Akron
1256	Bright, T. N.....	Chagrin Falls	1171	Cadwell, David.....	Monroe
2144	Bright, Wm.....	Wellsville	1965	Calkins, Authur B.....	Cleveland
1562	Brinker, J. H.....	Bellevue	0716	Callahan, P. A.....	Mingo
1678	Brighton, L. S.....	Hagerman	1404	Campbell, G. W.....	Clarksville
0186	Bristle, C. D.....	Cincinnati	1970	Campbell, J. S.....	Cleveland
0774	Brock, Geo. W.....	Lancaster	1384	Campbell, W. H.....	Congress
1226	Brockerman, Geo.....	Rushsylvania	0068	Campbell, W. J.....	LaRue
0382	Brongers, John.....	Hinckley	1814	Campbell, Shelby P.....	Aberdeen
0771	Brookins, W. C. M.....	Eaton	2542	Carmon, N. F.....	Lyons
0296	Brooks, A.....	Wellston	1940	Carey, M. J.....	Woodville
0149	Brown, F. A.....	New Lisbon	1672	Cargill, H.....	Fort Jefferson
0085	Brown, Geo. W.....	Wilmington	1063	Carlin, G. A.....	West Salem
2525	Brown, J. E.....	Granville	0432	Carlisle, Frank L.....	Newton Falls
0026	Brown, J. J.....	Springfield	1704	Carmack, G. L.....	North Baltimore
1712	Brown, R. S.....	Summerfield	0225	Carmon, C. E.....	Lyons
1799	Brown, T. F.....	Washington C. H	1475	Carnahan, W. S.....	Steubenville
1486	Brown, Wilber.....	Sycamore	1774	Carnahan, James.....	Steubenville
0853	Bruce, James.....	Cleveland	1130	Carnell, H. D.....	Dayton
2516	Bruck, Philip H.....	Columbus	1129	Carnell, H. G.....	Dayton

0287	Carothers, W.....	Carey	2146	Cline, W. C.....	Wilksville
0691	Carpenter, S. W.....	Delhi	1472	Costes, J. W.....	Lebanon
1850	Carr, Aaron.....	Liverpool	0139	Coblentz, C.....	Cleveland
1271	Carroll, F. S.....	Cleveland	0115	Coblentz, Frank H..	Springfield
2544	Carsey, John T.....	Portsmouth	0028	Coblentz, Virgil....	Springfield
1508	Carson, D. D.....	Palmyra	1852	Coe, Geo. O.....	Edison
0717	Carson, F. K.....	Springfield	0645	Coe, J. M.....	Mt. Gilead
1410	Carter, B. F.....	Arcanum	0785	Coffman, H. C.	Washington, C. H.
0391	Carter, Geo. Hiram..	Delaware	1845	Coffman, J. A..	West Alexandria
1033	Cartwright, J. W.....	Payne	0451	Cokefair, Chas. B.	College Corner
1511	Carvin, Theodore S..	Edon	0614	Colby, Willis D.....	Defiance
1369	Case, A. H.....	Milan	2036	Cole, J. C.....	Montgomery
0639	Case, F. S.....	Bellefontaine	0732	Coleman, Geo. E.....	Troy
0408	Case, F. S.....	Logan	0972	Coleman, J. C.....	Mineral
0628	Case, J. H.....	Akron	0446	Collett, O. F..	New Burlington
0973	Casenhiser C.....	Clinton	0819	Collins, F. A.	Newark
0943	Caslow, R. C..	Canal Winchester	1386	Collins, J. J.....	Deshler
0762	Casper, T. J.....	Springfield	0818	Collins, Jas. W.....	Newark
1023	Cassaday, A. S.....	Alliance	2512	Collins, Paul L. D...	Newark
0681	Cassady, L. L..	West Lafayette	1199	Collins, P. S.	Washington C. H.
2098	Cassady, Julius ...	Cleves	0817	Collins, R. F.....	Newark
1739	Casterline, J. P.....	Painesville	1245	Collins, R. J.....	Tontogany
1736	Casterline, Z. F.....	Painesville	2070	Colwell, Jas. M.....	Urbana
1152	Crawley, P. F.....	Fayette	1198	Conkright, A. B.....	Richwood
1758	Chadwick, W. M.....	Findlay	0111	Conner, B. F.....	Carysville
1897	Chambers, R. W.....	Mt. Pleasant	0565	Conner, John F....	Cumberland
0198	Champney, A. R.....	Perrysburg	0215	Connor, John O.....	Urbana
0769	Chapman, C. H..	North Fairfield	1639	Converse, A. Z.....	Carroll
1250	Chapman, S. D.....	Lorain	0725	Cook, A.....	Chardon
0659	Chappelear, C. F....	Zanesville	1414	Cook, A. B.....	Chardon
0630	Chappelear, F. B.....	Zanesville	1767	Cook, F. G.....	Youngstown
0631	Chappelaer, W. M...	Zanesville	0513	Cook, Frank M.....	Prospect
0632	Chappelear, W. R....	Zanesville	0312	Cook, Geo. W.....	Prospect
2176	Charles, I. C.....	Lucas	0823	Cook, Harry C.....	Columbus
1426	Chatfield, F. A.....	Bloomville	0779	Cook, John R.....	Columbus
0836	Chatten, J. H.....	Milford	1765	Cooke, L. J.....	Geneva
2556	Cheney, F. J.....	Toledo	1881	Cook, Sanford W..	East Toledo
1056	Chilcote, Wm. H....	Edgerton	0422	Cook, T. H.....	Scio
0826	Chilcote, Joshua....	Edgerton	1887	Cook, W. M.....	Madison
1055	Chilcote, J. M.....	Edgerton	1858	Cooley, Samuel....	Harriettsville
1980	Chittenden, E. S..	Republic	0813	Cope, W. M.....	Cleveland
2086	Christy, T. H.....	Roseville	2025	Cole, P. C.....	Montgomery
2181	Clancy, C. W.....	Smithfield	1770	Copeland, E. J.....	Chester
0609	Clark, A. S.....	Beverly	1373	Corcoran, D. O.....	Oxford
0138	Clark, B. E.....	Cortland	0188	Corill, J. O.....	Jefferson
1750	Clark, C. A.....	Mt. Sterling	1395	Corn, Jasper.....	Fazeysburgh
1841	Clark, D. L.....	Kimbolton	1468	Cornell, J. W.....	Hazelwood
0666	Clark, F. P....	North Baltimore	1803	Cornell, Chas R....	Columbus
1989	Clark, S. C.....	Cortland	0634	Cornet, Geo. A.	Port Washington
1658	Clark, S. L.	Wharton	0633	Cornet, L. A..	Port Washington
0670	Claassen, Edo.....	Cleveland	1428	Corry, M. H.....	Xenia
1014	Clayton, E. P....	Somerset	1568	Cottingham, W. A.....	Troy
1880	Clemons, Chas. E....	Toledo	2022	Coulson, E. G.....	Pennsville
1241	Cline, A. M.....	Graysville	0810	Covert, J. Wells....	Perrysville
2132	Cline, S. T.....	Lee	1499	Cowgill, A. B.....	Zanesville

1086	Cox, Daniel.....	Martin's Ferry	0477	Day, H. L.....	New Vienna
1263	Craine, Chas.....	Geneva	0196	Dean, W. D.....	Kenton
0967	Crane, R. W.....	Greensburg	1316	Decker, Gerhard.....	Cincinnati
0490	Cramer, Geo. W.....	Urbana	0749	Deckman, W. H.....	Malvern
1366	Cramer, S. P.....	Hubbard	0411	Deems, W. C.....	Toronto
0869	Crane, E. J.....	Iberia	2115	Dehmel, Louis.....	Wyoming
1413	Crawford W. L.....	Columbus Grove	2044	DeLang, Alfred.....	Cincinnati
1381	Crawford, S. B.....	Kieferyville	2523	Delphay, Eden V.....	Toledo
1753	Crist, F. W.....	Nevada	0977	Dempsey, J. A., Berlin Cross Roads	
1422	Crites, Harvey.....	Akron	0441	Denig, John M.....	Columbus
0904	Crites, Geo. W.....	Canal Dover	1099	Denis, Henry.....	Cincinnati
1996	Crittenden, C.....	Geneva	2117	Denison, L.....	Marion
1851	Crittenden Henry W....	Burton	0389	Denman, D. M.....	Cincinnati
2013	Critzer, Mrs. Amelia.....	Ai	0390	Denman, John.....	Cincinnati
1884	Crosby, C. M.....	Toledo	1036	Denman, Wm. M.....	West Unity
0134	Crossland, J. F.....	St. Clairsville	1484	Dent, J. C.....	Bridgeport
2052	Crowther, F. A.....	Cincinnati	1065	Dentler, S. S.....	Republic
1964	Churchill, S. P.....	Cleveland	1552	DeRoads, W. H., Franklin Square	
1945	Crumley, C. W.....	Steubenville	1159	Derrickson, D. K.....	Springfield
1886	Cullison, W. W.....	Toledo	2520	Deuschle, W. D.....	Chillicothe
0224	Cunning, Officer.....	Trenton	0060	Deutsch, J. W.....	Cleveland
1114	Cunningham, J. C.....	Shreve	1879	Dever, Ed.....	Fredericktown
1200	Cupp, Chas. V.....	Bellevue	1956	Dewitt, M. A.....	Cleveland
0290	Currey, J. N.....	Georgetown	0988	Dew, J. T.....	Summerfield
1243	Curtis, R. L.....	Marietta	1465	Dick, C.....	Sandusky
1662	Curtis, W. P.....	Wadsworth	1355	Dick, W. L.....	Columbus
2114	Daily, A. C.....	Lee P. O	1359	Dickson, E. C.....	Canal Dover
1237	Dalrymple, Frank.....	Hicksville	1728	Dickerson, Geo. Z.....	Malta
0951	Danforth, E. C.....	Toledo	1306	Diehl, Chas.....	Cincinnati
2049	Daniels, Henry G.....	Cincinnati	0970	Diemert, Daniel A....	Cleveland
0676	Daniels, Thos.....	Toledo	1899	Deitz, J. C.....	Dayton
0217	Danley, H. M.....	Racine	1632	Dittoe Linus L.....	Somerset
1252	Dann, A. T.....	Cincinnati	0157	Dixon, George M.....	Dixon
0172	Darrach, D. H.....	Bellaire	1042	Doak, A. S.....	Winchester
0760	Darrach, J. W.....	Martin's Ferry	1984	Dodd, G. W.....	Dell Roy
1174	Davidson, Andrew.....	Lancaster	0833	Doeller, George.....	Hamilton
1173	Davidson, James A....	Lancaster	1301	Doerr, C. A.....	Cincinnati
0182	Davis, Adam.....	Dyson	1009	Doll, Aaron.....	Dayton
2010	Davis, B. F.....	Tontogany	0757	Doll, W. H.....	St. Marys
0197	Davis, C. W.....	Jeffersonville	1624	Doran, L. S.....	Rushsylvania
0338	Davis, Daniel.....	Midland City	0942	Dorfmeier, Ino. H.....	Dayton
1647	Davis, D. D.....	Edinburgh	1176	Douce, C. W.....	Caledonia
0543	Davis, D. J.....	Oak Hill	1333	Douds, Alvin H.....	Canton
0606	Davis, E.....	Middleport	1702	Dougherty, L. E.....	Greentown
1871	Davies, T. C.....	Ironton	1816	Douglass, C. F.....	Kalida
2008	Davis, Frank G.....	Tippicanoe City	1912	Douglass, Wm.....	Kipton
1347	Davis, Jas. M.....	Chillicothe	2005	Dover, R. Fay.....	Dayton
0162	Davis, J. D.....	Kent	1217	Downar, J. R.....	Cambridge
1215	Davis, J. E.....	West Alexandria	0965	Downing, A. J.....	Hollansburgh
0286	Davis, J. F.....	Portsmouth	1621	Doyle, Samuel.....	Winchester
0307	Davis, J. L.....	Kimbolton	1069	Drach, Geo. L.....	Cleveland
1001	Davis, S. H.....	Oberlin	0230	Drake, Wallace C.....	Lodi
0322	Davis, W. P.....	Akron	1961	Drackett, P. W.....	Cleveland
0253	Davis, W. T.....	Leesburgh	0580	Dreher, Alfred.....	Cleveland
1855	Davison, Monroe.....	West Newton	0581	Dreher, L.....	Cleveland

0862	Duffield, W. H.....	Germano	2188	Evans, Jason S.....	Cincinnati
0106	Dugan, A. W.....	White Cottage	1188	Evans, J. W.....	Delphos
1145	Dunham, L. E.....	Mt. Washington	0991	Evans, Jas. P.....	Bradner
1146	Dunham, W. E.....	Mt. Washington	1827	Kvans, L. C.....	Dayton
0683	Dunlap, G. G.....	Unionport	1826	Evans, Owen.....	Dayton
0682	Dunlap, W. B.....	Unionport	0417	Evans, S. B.....	Circleville
1223	Dunn, F. H.....	Bainbridge	1745	Eveland, Geo. H.....	Miamiville
1418	Dupler, Thos.....	Gloucester	1161	Ewing, G. A.....	Jackson
1048	Dustin, C. H.....	Cleveland	1727	Ewing, John.....	McConnellsville
0136	Dye, W. H.....	Harrisonville	0059	Eyman, Lou. E.....	Groveport
0642	Eady, Henry J.....	Elyria	1089	Eyman, H. C.....	Groveport
0831	Eakin, T. C.....	Columbus Grove	0569	Eysenbach, H. P.....	Delphos
1815	Earhart, A. C.....	Locust Ridge	1302	Fabing, J.....	Cincinnati
1734	Earhart, Clifford.....	Franklin	1279	Fallon, J. M.....	Cincinnati
1733	Earhart, M. W.....	Franklin	1083	Fannon, S. J.....	Bowersville
0518	Eaton, H.....	Barnesville	1797	Farquhar, G. S.....	Glenford
0522	Eddmon, A.....	Tontogany	0239	Farquhar, John.....	Bucyrus
0370	Eger, George.....	Cincinnati	0238	Farquhar, Wm.....	Bucyrus
0023	Eggleston, J. V.....	New Plymouth	1811	Fasig, A. M.....	West Cairo
1873	Egner, F.....	Cincinnati	1812	Fasig, C. S.....	Beaver Dam
1491	Eichberg, Julius H.....	Cincinnati	0104	Fauley, C. B.....	Fultonham
1503	Eisenhour, Chas. L.....	Massillon	1372	Faulkner, L. W.....	St. Paris
1553	Eisenhour, W. A.....	Oak Harbor	1394	Federspiel, Philip.....	St. Marys
1714	Elder, J. J.....	Bremen	1718	Fee, F. M.....	Bethel
0652	Eldrick, J. D.....	Greenfield	2032	Feemster, William.....	Cincinnati
0811	Elflein, Wm. F.....	Cleveland	2524	Feil, Joseph.....	Cleveland
1872	Elfers, Joseph C.....	Cincinnati	1955	Feil, Sidney R.....	Cleveland
0866	Ellis, James.....	Harveysburg	0381	Fell, A. R.....	Burgh Hill
0981	Ellison, O.....	Ironton	1156	Fella, J. B.....	Toledo
0344	Ellsworth, C. S.....	Brecksville	0605	Felt, F. D.....	Wellington
1419	Elser, P. C.....	Dupont	1987	Fenimore, J. E.....	Fremont City
2183	Elwell, W. H. C.....	Rural Dale	0357	Fennel, C. T. P.....	Cincinnati
2184	Elwell, T. L.....	Rural Dale	0352	Fenner, J. C.....	Shiloh
0124	Elwood, Clark.....	Leesburg	1969	Fenton, C. F.....	Cleveland
0604	Ely, J. S.....	Barnesville	1409	Ferguson, C. W.....	Roscoe
1466	Emanuel, Emma C.....	Antwerp	1147	Fickardt, Geo. H.....	Circleville
1132	Emrick, D. L.....	Greenville	1278	Fieber, G. A.....	Cincinnati
1341	Emrich, J. H.....	Sandusky	0377	Field, J. W.....	Marysville
0684	Emery, G. A.....	Rendville	2105	Field, W. C.....	Cleveland
0643	England, W. L.....	Jewett	2139	Fife, W. J.....	Melrose
0119	Englebray, F. E.....	Vermillion	0462	Finckrook, M. B.....	Mansfield
0537	Ensign, Chas. A.....	Youngstown	0500	Finney, Drayton J.....	Niles
0538	Ensign, Ellis.....	Youngstown	0931	Finney, Geo. W.....	Dennison
1158	Eppelin, Chas.....	Pomeroy	2142	Fisler, Arthur.....	Burbank
0185	Ernest D.....	Mechanicsburg	0214	Fisler, I.....	Urbana
1368	Erwin, James Jay.....	Hazleton	0854	Fisher, Emil A.....	Cleveland
2533	Esch, C. A.....	Cleveland	0168	Fisher, George.....	Portsmouth
2002	Espach, J. Geo.....	Cincinnati	0090	Fisher, J. V.....	Morristown
2069	Espy, J. A.....	Youngstown	1820	Fisher, M. A.....	Miamisburg
0548	Eshelman, L. J.....	Postoria	0006	Fitzpatrick, S. J.....	Fayetteville
1543	Estep, J. H.....	New Athens	0761	Flandermeyer, H. D.....	Cleveland
0337	Eubank, Thomas.....	Celina	0472	Flandermeyer, H. H.....	Cleveland
0856	Evans, E. H.....	Cleveland	0974	Flavien, Wm.....	Paulding
0850	Evans, E. M.....	Palmyra	1010	Fleck, J. J.....	Tiffin
0879	Evans, George.....	Dublin	1115	Fleming, A. H.....	East Liverpool

1633	Fleming, E. C.....	Xenia	1575	Fulton, Thomas.....	Frankfort
1801	Flickinger, Geo. W..	Mogadore	2567	Funk, F. M.....	Toledo
0444	Flood, W. H.....	Cleveland	0786	Funk, H. H.....	Beverley
1031	Francis, H.S.....	Uhricsville	1396	Funk, M. F.....	Mowrystown
1117	Francis, W. J.....	Uhricsville	1582	Furney, M. G.....	Kenton
1535	Francisco, Chas.....	Dayton	0607	Gackenheimer, L. F.	Van Wert
0890	Franke, A.....	Wapakoneta	0309	Gaitree, W. B.....	Cincinnati
0986	Franks, L. K.....	Doylestown	1196	Galbreath, J. W....	Higginsport
1461	Fratz, J. G.....	Cincinnati	0724	Galloway, Geo.....	Xenia
1573	Frazer, G. M.....	Bellefontaine	0497	Gans, Wick C.....	Youngstown
1187	Frazer, O. F.....	Chagrin Falls	0001	Gardner, A. J.....	Grand Rapids
2105	Fredenburg, W. M....	Convoy	1002	Gardner, J. M.....	Oberlin
0330	Freehafer, J. B.....	Port Clinton	0218	Garlington, Conway,	Cumberland
2077	Freeman, Chas. E....	Columbus	0838	Garrett, J. W.....	Adamsville
2066	Freeman, Will W....	Columbus	1390	Garrison, Geo. M....	Rochester
0072	French, L. B.....	Salem	0924	Garritt, J. M.....	Huron
0689	Frey, J. W.....	Findlay	0839	Garver, Alex.....	Navarre
1688	Prey, S. D.....	Findlay	2037	Garver, Philip A....	Strasburgh
2048	Foertmayer, A. W....	Cincinnati	1328	Garwood, D. H.....	West Liberty
0242	Fogle, G. T.....	Alliance	1830	Garwood, F. A.....	Springfield
2024	Foland, D. J.....	Wilmington	1903	Garwood, Spencer..	Milford Cent'r
0948	Folkeas, C. Otto....	Cleveland	0568	Gates, Anton.....	Toledo
0213	Folsom, C. B.....	Youngstown	0024	Gates, Joseph.....	Toledo
0285	Foltz, Mrs. M. J....	Montpelier	0656	Gatewood, W. E....	Stockport
1612	Foncannon, C. W....	Toledo	1358	Gault, T. F.....	New Concord
1778	Foncannon, G. U.,	Liberty Centre	0507	Gault, W. P.....	Westerville
0041	Forbes, Robt.....	Bedford	0954	Gaylord, Henry C....	Cleveland
1168	Ford, E. L.....	Middlefield	1143	Gazlay, John.....	Clyde
1525	Ford, Oscar.....	Collins	0216	Gearhardt, T.J.,	Tippecanoe City
1013	Ford, Wm.....	Wakeman	1642	Gee, F. E.....	Ashtabula
1651	Foreaker, John W....	Corning	0527	Gegelein, Fred L....	Cleveland
2137	Forrest, James T....	Cleveland	0155	Gehrun, John M....	Cleveland
1925	Forman, H. M.....	Bradford	2135	Geiger, John C.....	Cleveland
0070	Fortney, B.....	Orwell	1228	George, A. H.....	Cleveland
1407	Foster, A. M.....	Steubenville	2128	George, Robt. H....	Cleveland
1701	Foutz, A. L.....	West Lafayette	1135	Gerstacker, M.....	Cleveland
2064	Fovargue, F. P.....	Genville	291	Gest, Albion P.....	Columbus
0261	Foye, W. B.....	Marion	0317	Geyer, J. L.....	Norwich
2557	Frederich, J. F.....	Toledo	1783	Gibbons, Ed.....	Painesville
0074	Friedland, J. F.....	Coalton	0281	Gibson, F. W.....	Amesville
1280	Frihmelt, E.....	Cincinnati	256-	Gibson, Walter M...	Portsmouth
0423	Fristoe, Ed. J.....	Hebron	1730	Gilbert, A. W.....	Lima
1759	Fritcher, James.....	Fostoria	0504	Gilbert, Daniel.....	Vanlue
1828	Frizell, J. S.....	Dayton	0485	Gilbert, H. A.....	Lockland
1636	Fromme, Albert.....	Cincinnati	1836	Gill, D. W.....	West Liberty
0392	Frost, A. H.....	Harrison	1509	Gill, Geo.....	Bloomington
1330	Frost, F. H.....	Lebanon	1406	Gillard, W. H.....	Oxford
0730	Fuelling, L. D.....	Wapakoneta	1679	Githens, E. W.....	Bridgeport
0201	Fuller, C. W.....	Newark	0587	Given, J. M.....	Chandlersville
1344	Fullerton, H. S.....	Hillsboro	1492	Gleick, Wm. M.....	Cincinnati
1771	Fuls, Otto.....	Cincinnati	1832	Gleim, J.C.....	Cleveland
1068	Fulkerson, G. W....	Wynant	0137	Glenn, A. H.....	Sardinia
0236	Fulton, C.....	Bucyrus	0597	Glines, Geo. W.....	Cleveland
0237	Fulton, M. D.....	Bucyrus	2507	Godfrey, C. P.....	Fostoria
1576	Fulton, Robert.....	Frankfort	2038	Goetze, H. J.....	Lockland

2152	Goetze, Wm. F.....	Lockland	0263	Gwinner, Arnold F.....	Dayton
1958	Godman, C. A.....	Cleveland	0521	Gysel Robert.....	Toledo
2118	Goheen, C. E.....	Hepburn		Glandt, W.....	Cincinnati
2505	Goldbach, John.....	Toledo	0901	Haag, Geo. D.....	Cleveland
2079	Good, J. C.....	Cleveland	1992	Haber, Louis A.....	Cleveland
1915	Good, J. F.....	New Hampshire	0709	Hackedorn, H. G.....	Galion
0503	Goodbread, J. N.....	Nevada	0708	Hackedorn, M. L.....	Galion
0502	Goodbread, W. F.....	Nevada	1389	Hageman, J. F. S.....	New Madison
0359	Goodman, Emanuel.....	Cincinnati	1481	Hagerman, S. A.....	Dunkirk
1717	Gordon, T. V.....	Junction City	2094	Hahne, John A.....	Dayton
2041	Goss, Alfred R.....	Edinburgh	1195	Haight, A. P.....	Remson's Corners
2040	Goss, Ambrose S.....	Edinburgh	0187	Hair, T. G.....	Alliance
2042	Goss, Nathan K.....	Edinburgh	1247	Halboth, J. A.....	Pemberton
1581	Goull, D. T.....	Berea	1563	Hale, F. P.....	Bellevue
1318	Grieme, F.....	Cincinnati	0909	Hale, W. F.....	Jackson
1051	Griffith, A.....	Millers	1087	Hall, J. M.....	Greenville
1050	Griffith, G. W.....	Millers	1088	Hall, J. W.....	Greenville
0144	Grimes, G. G.....	Bairdstown	1860	Hall, R. C.....	Lewis Center
0027	Grimes, H. M.....	Ostrander	1994	Hall, Wilmot J.....	Cincinnati
1172	Griswold, Edgar W.....	Cleveland	1110	Hamel, Henry.....	Genoa
0911	Graef, Paul.....	Fletcher	1405	Hamill, Jason.....	Clarksville
2177	Graham, J. W.....	Prairie Depot	0150	Hamilton, M. N.....	New Lisbon
1520	Graham, Allan, Jr.....	Ottawa	1661	Hamilton, Thos. T.....	Wellsville
0679	Graham, Clar. V.....	Zanesville	0015	Hamilton, Wm. M.....	Wellsville
1607	Graham, G. A.....	Lebanon	0778	Hamlin, R. E.....	Toledo
1795	Graham, Miller.....	Avondale	1186	Hammer, O. S.....	Lynchburgh
0678	Graham, W. A.....	Sandusky	0738	Hammer, W. P.....	Westboro
0694	Grand Gerard, G. F.....	Circleville	0979	Haner, A.....	Plain City
0208	Grasser, Geo. D.....	Newark	0232	Hanes, John H.....	Harrisburgh
0626	Graves, P. A.....	Hartford	0336	Hannah, W. H.....	Georgetown
1817	Green, E. E.....	New Paris	0899	Hapgood, Adeline.....	Warren
0406	Greene, Harry E.....	Portsmouth	0898	Hapgood, Wm.....	Warren
0994	Green, Harry M.....	Mt. Vernon	0549	Harbaugh, Levi.....	Fostoria
0993	Green, Israel.....	Mt. Vernon	2078	Harbison, W. F.....	Spencerville
1084	Green, John T.....	Mechanicstown	1691	Hardy, A. S.....	Unionville
0576	Greenamyer, E.....	East Palestine	0888	Hardy, W. A., Sr.....	Lebanon
0654	Greer, Henry.....	Mt. Blanchard	0889	Hardy, W. A., Jr.....	Lebanon
0426	Greiner, C. F.....	Luckey	2107	Hare, Abraham.....	Bellville
0864	Grether, John.....	Akron	1997	Harley, J. P.....	Ashland
1118	Greve, C. M.....	Cincinnati	0492	Harley, John P.....	Lima
0358	Greve, T. L. A.....	Cincinnati	0379	Harmar, L. J.....	Pennsville
0360	Greyer, Julius.....	Cincinnati	0690	Harmon, J. F.....	Oberlin
1307	Groenland, Robt.....	Cincinnati	0049	Harmon, M. M.....	Columbus
0955	Groenland, Otto.....	Cincinnati	0937	Harper, C. B.....	Leetonia
1134	Grosse, W. F.....	Cleveland	0699	Harpster, David.....	Toledo
0842	Grossklaus, Jonn F.....	Navarre	0895	Harpster, W. R.....	Genoa
2027	Grossman, Fred. A.....	Cleves	1784	Harrington, F.....	Logan
0440	Grove, Frank B.....	Mansfield	1281	Harrison, J. M.....	Cincinnati
1839	Grubbs, A. L.....	Sabina	0861	Harrod, T. N.....	Bellecenter
0125	Grund, Henry C.....	Fremont	0087	Harshberger, A. L.....	Tippecanoe
1034	Guttilius, T. F.....	Thornville	1239	Hart, George W.....	West Milton
0257	Guthrie, D. P., Jr.....	Belpre	0753	Hart, W. T.....	Cleveland
0298	Guthrie, D. S.....	Hillsborough	0909	Harter, H. G.....	Helena
0046	Guthrie, J. H.....	Conneaut	0525	Harter, Martin.....	Milan
1813	Guthrie, J. W., Sr.....	Aberdeen	2549	Harter, Otto M.....	Milan

0763	Hartinger, W. M....	Middleport	2151	Higley, W. C.....	Coolville
0885	Hartman, A. H.....	Galion	1142	Hildaboldt, C. W..	Germantown
1870	Hatton, Chas. F.....	Zanesville	1213	Hildreth, N. G.....	Cheviot
2517	Hatton, Edgar M....	Zanesville	0765	Hill, C. E.....	Richwood
1869	Hatton, Elmore W....	Zanesville	1190	Hill, F. P.....	Van Wert
0054	Hauck, A. L.....	Ottawa	1032	Hill, L. K.....	Senecaville
0035	Hauck, Thos.....	Columbus Grove	0053	Hill, J. L.....	Waverly
0135	Hauenstein, A.....	Bluffton	1423	Hill, M. S.....	East Liverpool
0825	Hauser, J. C.....	Sandusky	0586	Hill, Walter.....	Swanton
1093	Hauser, Martha.....	Ripley	2180	Hill, Wm.....	Uhrichsville
0758	Haus, John.....	St. Marys	1710	Hill, W. A.....	Oakwood
0264	Haven, W. H.....	Findlay	0691	Hilles, Geo. E.....	Barnesville
0077	Hawkins, M. J.....	Brunswick	0877	Hinder, J. W.....	Marion
0045	Hawkins, M. S.....	Salem	0048	Hines, J. A.....	Van Wert
1282	Hawkins, R. L.....	Cincinnati	0667	Hipple, J. H.....	Andover
0702	Hawley, A. K.....	Jefferson	2519	Hittler, J. A.....	Columbus
1016	Hawthorn, D. M....	Cambridge	1493	Hoberg, Herman H..	Cincinnati
0456	Hayden, Mary E....	Cincinnati	1025	Hoberman, H. C.....	Marion
1024	Hayes, O. P.....	Mantua Station	1242	Hobensack, J. D....	Martin's Ferry
0032	Haynes, J. F.....	Ironton	1424	Hodson, J. I....	East Liverpool
2136	Hays, Chas.....	Fostoria	0191	Hodson, M. T.....	Pioneer
1151	Hayward, J. L.....	Gallipolis	1960	Hoehn, John.....	Cleveland
0436	Hearson, R. T.....	Attica	2054	Hoever, Joseph.....	Cincinnati
1809	Heath, F. T.....	Cuyahoga	0616	Hoffman, John.....	Toledo
1810	Heath, F. S....	Cuyahoga Falls	0465	Hoffman, J. L.....	New Bremen
0076	Heath, F. M....	White House	1746	Hoffman, Otto L....	Columbus
1808	Heath, T. F....	Cuyahoga Falls	0362	Hofling, A. J.....	Cincinnati
1547	Hebenthal, L. W....	Pauiding	0315	Hoge, J. B.....	St. Clairsville
0204	Hebner, A.....	Dayton	2509	Hoglan, Phil....	Newcomertown
0453	Hechler, G. L.....	Cleveland	0534	Hohly, Charles.....	Toledo
1623	Hedges, Pearl J.....	Piqua	1126	Hoisington, F....	North Lewisburg
0532	Heffelman, W. M....	Cleveland	2021	Holcomb, H. C.....	Pierpont
0570	Heffley, J....	Canal Winchester	1054	Holden, C. E.....	Mineral Point
1805	Hefling, D.....	Gilmore	0781	Holland, E. F.....	Basil
0363	Heinemann, Arthur..	Cincinnati	1602	Hollenback, E. F....	Cincinnati
0934	Heinemann, Otto...	Cincinnati	0470	Hollenbeck, M. W....	Cincinnati
2057	Heister, J. P.....	Cincinnati	1973	Hollister, D. W....	Wauseon
0153	Heitzman, A.....	Toledo	0123	Holman, Harry N....	Columbus
1421	Helfer, C. E.....	Akron	1193	Holman, J. H.....	Sciotoville
2148	Heller, L. S.....	New Haven	0816	Holmes, C. E.....	Toledo
0935	Helman, C. M....	Madisonville	0918	Holmes, W. W.....	Columbus
1993	Helmick, S. C....	Commerce'l Point	1254	Holtz J. M.....	Fairview
0294	Henderson, C. B.....	Athens	1968	Honecker, Abr.....	Cleveland
2068	Hendess, Frank.....	Brooklyn	1967	Honecker, Jacob J..	Cleveland
0058	Henry, John K.....	Basil	2092	Hooker, R. J.....	Roscoe
1105	Henry, Wm. A.....	New Vienna	0703	Hoopes, M.....	Minerva
3566	Herbst, Ed.....	Columbus	0704	Hoopes, Wm. W....	Minerva
1932	Herbst, Fred. W....	Columbus	0535	Hoover E. C.....	Dayton
2164	Herring, Wm.....	St. Johns	1585	Hoover, James....	Goats P. O.
0427	Heun, Emil.....	Elmwood	0192	Hoover, John.....	Grove City
0438	Hickman, W. G....	Nelsonville	0396	Hoover, R. C.....	Osborn
1644	Hickok, H. M.....	Ashtabula	1534	Hoover, Z. T.....	Dayton
0809	Hiester, C. W.....	Massillon	0246	Hopkins, Wm. H....	Lynchburgh
1357	Higgins, C. O.....	Painesville	1519	Hopp, Lewis C.....	Cleveland
1356	Higgins, G. H.....	Painesville	0047	Hornung, John.....	Dresden

0598	Horst, J. H.	Cleveland	1991	Jackson, Geo. W.	Mt. Healthy
0636	Hosack, C.	Fredericktown	1635	Jacobi, Albert.	Fairmount
0788	Hosack, H. E.	Shelby	0866	James Ellis.	Harveysburgh
1266	Hostetter, S. A.	Ansonia	0700	Janny, J. E.	Waynesville
1265	Hostetter, T. J.	Ansonia	1536	Jeffrey, D. G.	Tiro
1070	Horn, Allen T.	Lewisburg	1537	Jeffrey, F. M.	Tiro
0983	Hosler, Geo. R.	Shauks	1167	Jenner, A. B.	Jenera
0664	Houghton, J. W.	Wellington	0701	Jewell, M. T.	Youngstown
0361	Hovekamp, Jno. J.	Cincinnati	1144	Jewitt, W. A.	Lorain
1038	Hovey, A. D.	Chardon	1680	Johns, W. A.	Newcomerstown
1613	Howell, J. B.	McComb	0467	Johnson, Chas. B.	Middletown
2061	Howell, J. G.	Freeport	2085	Johnson, C. S.	Carthage
0099	Howson, Walter H.	Chillicothe	1521	Johnson, Eugene.	Piqua
1934	Hoyt, Harry H.	North Fairfield	0161	Johnson, Geo.	Grafton
0450	Hubbard, E. B.	Tiffin	0878	Johnson, Chas. S.	New Concord
1205	Hubbell, C. L.	Monclova	1846	Johnson, James A.	Springboro
2104	Huber, H.	Ottawa	1387	Johnson, Joseph.	Sarahsville
1060	Huber, J. M.	Findlay	0595	Johnson, J. L.	Parkman
1878	Huber, Sam'l.	Findlay	1433	Johnson, J. M.	Steubenville
1571	Huffman, Marion.	Bellaire	0174	Johnson, J. R.	Zanesville
0712	Hugg, P.	Middleport	1670	Johnson, J. T.	Milnersville
1116	Huggins, T. A.	Chesterville	0479	Johnson, Thos.	Steubenville
2119	Hughes, W. K.	Berlin Centre	0235	Johnston, Frank T.	Bucyrus
0840	Hughey, B.	Frankfort	0234	Johnston, R. T.	Bucyrus
2125	Hughey, W. F.	Yellowbud	2099	Johnston, S. T.	Coldwater
1133	Hulbert, E. A.	Zaleski	1222	Jones, A. S.	Bainbridge
1616	Hull, H. M.	Cleveland	0283	Jones, C.	Saint Paris
1597	Hull, W. T.	Millersburgh	1244	Jones, David.	Columbus
2178	Hulls, D. W.	Rockbridge	1221	Jones, Homer E.	Frankfort
1408	Hulse, A.	Centreburch	0459	Jones, J. H.	Pomeroy
3561	Humiston, L. P.	Cleveland	0375	Jones, M. B.	Venedocia
1721	Hummel, H. L.	Baltimore	1151	Jones, Thos. W., Jr.	Oak Hill
0944	Humphrey, D. J.	Napoleon	0695	Jones, W. D.	Newark
0493	Humphrey, W. H.	Yellow Springs	1429	Jones, W. J.	Smithfield
2145	Hunter, F. C.	Wapakoneta	0166	Joyner, W. T.	Delaware
1724	Husman, Martin.	Cleveland	1485	Judkins, T. C.	Bridgeport
0939	Hussey, J. M.	New Vienna	1445	Jump, James S.	Kansas
0563	Huston, Chas.	Columbus	1743	Justice, C. R.	Poland
0457	Huston, J. C.	College Corner	1905	Justice, Joseph.	Gilboa
1322	Huston, T. B.	Toledo	1906	Justice, T. P.	Ottawa
1402	Hutchison, A. J.	Cambridge	0540	Kaeffer, Charles J.	Cincinnati
1403	Hutchison, J. C.	Cambridge	0751	Kaestlen, Samuel E.	Cleveland
0685	Hutt, Peru.	Waverly	1790	Kallmeyer, F. G.	Cincinnati
1019	Hyers, W. H.	Dayton	0893	Katter, Geo. W.	Dayton
1677	Ingalls, M. W.	LaGrange	1284	Kampfmueeller, C.	Cincinnati
1184	Ingersoll, C. H.	North Ridgeville	0259	Kapper, Martin.	Canton
0495	Inman, Chas. T.	Akron	1709	Karb, George J.	Columbus
0494	Inman, Sidney C.	Akron	1603	Karman, Wm.	Cincinnati
0726	Ink, Chas. E.	Columbiana	0975	Kauffman, D. E.	Payne
0551	Ink, H. H.	Leetonia	2536	Kauffman, Geo. B.	Columbus
1716	Irwin, Chas. L.	Mansfield	1309	Kautz, A. F.	Cincinnati
1685	Irwin, Chas. H.	Martinsville	2170	Kautzleben, H.	Dayton
2016	Isaacs, Benj. S.	Dayton	1047	Kayser, Wm.	Wapakoneta
1910	Jackman, Winfield.	Knoxville	0941	Kearns, F. M.	Bridgeport
1913	Jacks, L. W.	Mentor	1786	Keepers, G. A.	Beallsville

1792	Keeshan, E. A.....	Cincinnati	2033	Kochenderfer, Jno. A..	Rendville
1308	Keeshan, John.....	Cincinnati	1462	Koehler, R. H.....	Cincinnati
2047	Keeshan, M. F.....	Cincinnati	0364	Koehnig Herman H.	Cincinnati
0870	Keiper, Franz.....	Cleveland	0354	Koenig, John H.....	Cincinnati
0871	Keiper, Louis.....	Cleveland	0228	Kolb, Adolph.....	Columbus
0127	Kelch, J. R.....	Tarleton	1665	Kraps, J. F.....	Dexter
0083	Keller, Charles.....	Reading	1666	Kraps, John W.....	Dexter
1136	Keller, M.....	Dayton	1888	Krauer, E. D.....	Pickerington
1587	Kellison, W. H.....	Quincy	1326	Krauter, C. H.....	Youngstown
1175	Kelly, C. E.....	Caledonia	1234	Krebs, Chas.....	Cleveland
0003	Kelly, W. T.....	Frankfort	1391	Krebs, R. J.....	Westminster
0055	Kelly, W. W.....	Ottawa	1959	Krebs, Wm.....	Cleveland
1988	Kemp, D. G.....	Ada	1112	Krebsz, Hermann....	Cleveland
0583	Keenan, G. W..	Upper Sandusky	0300	Krehbiel, A. J.....	Dayton
0623	Kennedy, C. W....	Deavertown	1667	Kremer, Julius A....	Columbus
0348	Kennedy, Francis....	Bryan	1463	Krieger, J. C.....	Cincinnati
0959	Kennedy, S. F.....	Felicity	1418	Krimmel, John L....	Circleville
0468	Kerr, Chas. D.....	Gallipolis	1364	Krumm, John M.....	Toledo
0319	Kerr, Frank P.....	Huntsville	0107	Kuester, L. C.....	Zanesville
0822	Kerans, G. R.....	Cuba	0461	Kuhlmeier, Henry....	Cleveland
0735	Kerns, J. L.....	Quincy	1722	Kumler, J. A.....	Baltimore
1927	Keuler, P. L.....	Rochester	2039	Kunkle, David C.....	Dayton
1283	Kiehl, Wm.....	Cincinnati	1526	Kusnick, Francis....	Riverside
0454	Kieffer, George....	Cleveland	1527	Kusnick, Leopold....	Versailles
2543	Kienzie, Frank....	Columbus	0599	Kutchbauch, J. F....	Dayton
0452	King, Chas. E.....	Cincinnati	1460	Kybitz, Louis.....	Cincinnati
1220	King, C. F.....	Arlington	0355	Kylus, Geo. W.....	Cincinnati
0189	King, M. V. B.....	Canfield	0957	Lace, J. H.....	Cleveland
2156	Kingham, Joseph..	Rocky Ridge	0851	Laffer, J. M.....	Akron
1646	Kinsey, Joseph....	Pleasant Hill	1375	Lake, J. H.....	Tiffin
1494	Kinzbach, F.....	Cincinnati	1472	Lake, V. W.....	Eaton
1754	Kiplinger, J. W....	West Salem	1782	Lamb, J. W.....	Milledgeville
1558	Kipp, Conrad.....	Greenville	1303	Lammert, C. J.....	Cincinnati
1182	Kipp, Wm.....	Greenville	1436	Landers, Geo. W....	Cincinnati
0324	Kirchhofer, P. Paul..	Massillon	1073	London, L. E.....	Kirby
2530	Kirchmaier, G. A....	Toledo	1752	Lane, A. L.....	Monroeville
1883	Kirchmaier, Hugo C..	Toledo	1951	Lane, L. B.....	Cleveland
1882	Kirchmaier, Wm.....	Toledo	1952	Lane, E. R.....	Cleveland
0547	Kirkpatrick, J. A....	Flushing	1700	Lange, F. R.....	Sandusky City
1715	Kirkpatrick, W. P....	Utica	1488	Langenbeck, A.....	Cincinnati
0791	Kirschner, Jos. N....	Toledo	0096	Lansing, R. H.....	Chillicothe
1113	Kistler, D. S.....	Palmyra	0404	Lash, E. R.....	Athens
1762	Klaphacke, Jno. H..	Cincinnati	0615	Lattimer, E. G.....	Hilliard
0365	Klayer, Chas. F.....	Cincinnati	1464	Latimer, Ira N....	East Liverpool
1791	Klayer, Louis.....	Cincinnati	1098	Latimer, J. W.....	Rock Creek
0464	Klein, David.....	Madisonville	2087	Latimer, O. B.....	Rock Creek
1017	Klein, C.....	Madisonville	1859	Latimer, V. D.....	Rock Creek
0980	Klussman, F. J.....	Elliston	1233	Latin, Geo.....	Dayton
1918	Knapp, Mrs. Delia A.	Kilbourne	0524	Laubach, Geo. R.....	Wooster
1643	Knapp, G. LeRoy....	Ashtabula	1170	Lauer, J. D.....	Conover
1979	Knapp, John.....	Cleveland	1588	Laughlin, R.....	Steubenville
1963	Knopf, H. C.....	Akron	2015	Lautenschlager, Geo. C.	Dayton
1329	Knowles, F. W.....	Felicity	0906	Laver, P. J.....	Mansfield
0163	Koons, C. W.....	Canton	1921	Law, H. B.....	Deersville
1541	Koch, Herman.....	Cincinnati	0800	Lawson, David.....	Warsaw

0801	Lawson, David J.....	Warsaw	1385	Lorey, C. N.....	Circleville
0245	Lazier, W. D.....	Xenia	1229	Lotze, George.....	Girard
1978	Leas, William.....	West Sonora	0651	Lotze, Louis L.....	Girard
1102	Leobold, John F.....	Attica	1091	Loutzenheiser, J. D.	New Phila'phia
2502	Ledman, O. S.....	Columbus	1035	Love, J. C.....	Moscow
1618	Lee, A. A.....	Painesville	0327	Lowry, A. J.....	Leipsic
0394	Lee, E. B.....	Garrettsville	2134	Lowry, O. F.....	Lore City
0997	Lee, E. S.....	Coshocton	1854	Lucas, J. H.....	Proctorsville
1617	Lee, N. O.....	Painesville	0132	Luckey, G. W.	South Charleston
0996	Lee, S. H.....	Coshocton	0062	Ludlow, Charles.....	Springfield
1998	Lee, W. G.....	Painesville	1192	Ludlum, S. D.....	Middletown
0409	LeFever, H. J.....	Eldorado	2014	Luebker, Hugo.....	Cincinnati
0776	Legg, George W.....	Latham	1645	Lyle, G. W.....	Scio
0933	Lehmkuhl, J. B.....	Hamilton	0084	Lynde, I. P.....	Kensington
0211	Lehr, Philip.....	Cleveland	1388	Lynne, T. J.....	Brown
2185	Lehrer, Chas. A.....	Sandusky	1890	Lynn, E. D.....	Canfield
1865	Leist, Isa.....	Napoleon	1053	Lynn, G. A.....	Akron
2513	Leman, M.....	Cincinnati	1891	Lynn, Geo. F.....	Canfield
0419	Lentz, C. F.....	Columbus	0124	Lyons, Geo.....	Milford Centre
0828	Leonard, A. W.....	Kinsman	1931	Lyon, L.....	Conneaut
1140	Lerch, J.....	Amanda	2169	Lytle, T. M.....	West Milton
2100	Leslie, B. F.....	Convey	0178	McAnnally, Horace W.	Troy
0243	Lewis, A. C.....	Bucyrus	0611	McBean, J. S.....	Cadiz
0308	Lewis, A. L.....	Hamden Junction	0321	McBride, C. F.....	Youngstown
0498	Lewis, B. G.....	Girard	1127	McCall, A. F.....	Bethel
1420	Lewis, E. D.....	Jackson	0229	McCarter, E. N.....	Columbus
0159	Lewis, E. N.....	Defiance	0207	McCarty, H. C.....	Zanesville
1137	Lickes, R. P.....	Steubenville	2165	McCaskey, C. B.....	Cincinnati
1941	Light, G. A.....	Columbus Grove	0510	McClain, Hugh.....	Letart Falls
1107	Lincoln, J. C.....	Bowling Green	0550	McClain, M. H.....	Galion
0485	Linden, H. F.....	Cleveland	1936	McClellan, A.....	New London
2545	Linden, W. E.....	Cleveland	1749	McClintick, S.....	Mt. Sterling
0857	Lindsley, D. C.....	Cleveland	1974	McClellan, W. M.....	Ashland
0179	Lindsey, E. D., Jr.....	Mansfield	0031	McCloud, R. C.....	Plain City
0180	Lindsey, E. H.....	Mansfield	0863	McCloud, S. N.....	Marysville
1200	Lingan, E. C.....	Dennison	0775	McClough, T. T.....	Somerton
1796	Lingan, John R.....	Columbus	0288	McConnell, Dell	Green Spring
1310	Linnemann, J. H.....	Cincinnati	0190	McConney, W. T.....	Atwater
1008	Linvill, A. H.....	New Salem	1155	McCormick, J. T.....	Xenia
0353	Lippert, Otto C. F.....	Loveland	0985	McCormick, Chas.....	Doylestown
0407	Lippert, H. G.....	Loveland	2528	McCoy, Frank.....	Cleveland
0173	Lisle, J. D.,	Springfield	1094	McCoy, H. F.....	Chauncy
0018	Little, J. Boyer.....	Fredericksburg	1549	McCoy, J. N.....	Kenton
1924	Little, J. M.....	Bradford	0622	McCuen, L. A.....	Independence
0272	Littler, J. W.....	North Robinson	1789	McCullough, A. H.....	Mansfield
2508	Lloyd, J. U.....	Cincinnati	0742	McColloch, C. R.....	Fremont
0471	Lloyd, N. A.....	Cincinnati	1866	McCullough, Wm.....	New Athens
0886	Lockard, J.....	Canton	1348	McCulloch, R. S.....	Fremont
0481	Lohman, O. F.....	Cleveland	0660	McDonald, S. S.....	New Lexington
0841	Long, W. A.....	Steubenville	1483	McDonnel, A.....	Antwerp
2149	Long, L. W.....	New Haven	0578	McDowell, O. H.....	Medina
0378	Longbrake, D. W.....	Logansville	0579	McDowell, R. M.....	Medina
1101	Longshore, S. D.....	New Lisbon	0339	McEwen, T. R.....	Youngstown
1255	Loomis, N. P.....	Olmsted	1917	McFadden, H.....	Magnetic Springs
1495	Lorentz, J. N.....	Cincinnati	0161	McGarraugh, T. S.....	Greenfield

1367	McGaughy, J. H.	Hubbard	1518	Mayell, A.	Cleveland
0575	McGill, W. W.	Salineville	2012	Mayer, John A.	Dayton
0506	McGonagle, A. B.	Brilliant	1837	Maxwell, Geo. F.	West Liberty
2059	McGonagh, Robert	Salineville	2540	Meggenhofen, C. W.	Columbus
0413	McIlvaine, J. J.	Cleveland	1311	Meiminger, A.	Cincinnati
2116	McIntosh, J. N.	Irondale	1471	Melsheimer, C. A.	Van Wert
1868	MacKenzie, A. G.	Wellsville	0511	Melsheimer, E. J.	Shelby
1614	MacKenzie, C. S.	Cleveland	1470	Melsheimer, W. W.	Van Wert
0484	McKeown, S. W.	Youngstown	0638	Melville, C. R.	Sandusky
0483	McKeown, W. W.	Youngstown	0637	Melville, Wm. M.	Lima
1785	McKinley, J.	Uhrichsville	1761	Menninger, J. G.	Cincinnati
1064	McKinley, J. M.	Ada	0773	Mercer, A. B.	Corning
1560	McLean, Alexander	Augusta	1027	Mercer, C. B.	Cuyahoga Falls
1274	McLain, J. H.	Urbana	0772	Mercer, C. L. V.	Mt. Vernon
1561	McLean, Will T.	Augusta	1652	Mercer, F. T.	Centerburgh
2088	McLeod, A. L.	Central College	1862	Mercer, J. I.	Portsmouth
2065	McLeod, J. R.	Benton Ridge	0252	Mercer, M. N.	Bellaire
0920	McMillen, W.	Greenwich	0953	Metz, A. H.	East Liverpool
1374	McMullen, Geo. W.	Toledo	0649	Metz, John W.	Youngstown
0517	McNaughton, M. W.	Coshocton	1793	Meyer, Geo. E.	Cincinnati
1248	Maddox, G. E.	Newtownville	0142	Meyer, H. C.	St. Clairsville
0241	Maddox, Wm.	Ripley	0892	Meyer, John.	Lima
0240	Maddox, W. E.	Ripley	0891	Meyer, William.	Piqua
1631	Magruder, J. J.	Somerset	2559	Meyer, Wm. V.	Cleveland
1169	Mahaffey, J. W.	Byhalia	1246	Michael, C.	Bellebrook
2000	Manville, A. J.	Bowling Green	1434	Michael, J. F.	Palestine
1877	Markle, J. B.	Findlay	1028	Milbourn, L.	Hanover
0617	Markley, L.	Georgetown	1062	Miller, C. M.	Stryker
2153	Marmon, J. Y.	Lima	0829	Miller, E. C.	New Carlisle
1681	Market, C.	Hamilton	2532	Miller, E. O.	Toledo
1342	Marquardt, Jacob F.	Tiffin	0908	Miller, F. C.	New Philadelphia
0210	Marquis J. S.	New Lisbon	1834	Miller, F. J.	West Union
0183	Martin, Alexander	Hannibal	1376	Miller, G. W.	Jackson
0016	Martin, J. D.	Reynoldsbush	0103	Miller, J. E.	Darbyville
1489	Martin, W. J.	Cincinnati	0545	Miller, K. D.	Neville
1365	Martindell, F.	Hamilton	1324	Miller, L. A.	Steubenville
1477	Marriott, E. L.	Dupont	1323	Miller, M. L.	Steubenville
1935	Marshall, Hugh.	St. Martin	0200	Miller, Orlando.	Newark
0706	Marshall, H. B.	Brookville	1415	Miller, P. B.	Gettysburg
2124	Marshall, Samuel B.	Agosta	0384	Miller, Rodney, West Farmington	
1874	Marty, Louis K.	Cincinnati	0546	Miller, W.	Neville
1699	Marvin, J. P.	Harrison	0289	Miller, Wm. C.	Hamilton
0129	Mason, Chas. C.	Buchtel	0907	Miller, W. H.	New Philadelphia
2096	Mason, David, Jr.	Oregonia	1807	Miller, Thomas J.	Hopedale
0715	Mason, G. W.	Stafford	1251	Milnor, W. L.	Fayette
0714	Mason, J. L.	Stafford	0722	Minton, J. E.	Sidney
0990	Mason, M. P.	Mansfield	1578	Mills, S. E.	Harbor
0619	Masters, C. W.	Bryan	0859	Moffett, Wm.	Arcadia
1719	Matthews, Mrs. G. L.	New Toledo	0523	Mohn, Carl F.	Cincinnati
0603	Mattison, T. C.	Berea	1674	Montague, D. T.	Xenia
1501	Mauer, Jacob, L.	Belivar	1831	Montanus, P. E.	Springfield
1949	May, Arthur F.	Cleveland	0478	Moan, D. H.	Blanchester
1990	May, Chas. H.	Piqua	2138	Moon, L. P.	Wilmington
0618	May, Daniel.	Poland	0846	Moon, O.	Spring Valley
0165	May, J. Myson.	Kingston	0539	Mooney, M. L.	Cardington

0403	Moore, Alexander..	Londonville	1515	Nesbit, James A.....	Bergholz
0078	Moore, A. C.....	Amelia	1473	Nevil, J. W.....	Cleveland
0621	Moore, C. A.....	Cambridge	1194	Newcomer, J. S.....	Wauseon
1458	Moore, E. C.....	Gann	0475	Newcomb, N. O.....	Cleveland
2113	Moore, G. H.....	Leesville	1498	Newcomer, M. F....	Pemberville
0128	Moore, J. C.....	West Mansfield	1755	Newell, Thos. A....	Bowerstown
1824	Moore, W. H....	Bellevue	2510	Newlove, Wm. J....	Columbus
1362	Moore, W. H....	Wagon Works	0171	Newton, Anna D,	New Straitsville
0516	Morgan, C. R.....	Quaker City	0170	Newton, G. A..	New Straitsville
1058	Morgan, J. B. F....	Clarksburg	1412	Nicholl, E. H....	New Amherst
0808	Morganthaler, Philip..	Massillon	1806	Nichols, D. T.....	Newark
0803	Morris, Evan J....	Garrettsville	1676	Nichols, Edwin.....	Newark
0968	Morris, Frank.....	Harrod	1692	Nichols, E. S.....	Canton
0995	Morris, W. E.....	New Holland	0102	Nichols, John.....	Columbus
0961	Morrison, R. J....	Steubenville	0101	Nichols, John M....	Columbus
0958	Morse, Geo. B.....	Huron	0913	Nickerson, F. B....	Greenwich
0756	Morran, Henry....	North Toledo	1589	Nickerson, Orlo....	Litchfield
0919	Mortland, J. C.....	Edgerton	1533	Nickum, M. J....	Pleasantville
0013	Moss, J. W....	New Richmond	0705	Nihart, D. H.....	Lima
1928	Moss, W. F.....	Maineville	0792	Nill, George C.....	Toledo
2168	Mote, L. M.....	West Milton	0728	Nippen, Frank M....	Cincinnati
0395	Mott, F. F.....	Garrettsville	2515	Nippen, J. A.....	Chillicothe
1191	Mounts, J. L.....	Morrow	2546	Nippen, J. B.....	Dayton
0320	Mudge, W. D.....	Weston	0602	Noble, W. W.....	Berea
2025	Muehlberg, Edward..	Cincinnati	2097	Noe, A. J.....	Moxahala
2026	Muehlberg, Wm.....	Cincinnati	0860	Norman, A. H.....	Edenton
1285	Mueller, C. H.....	Cincinnati	2003	Norman, O. M.....	Roseville
1570	Mulford, John H.....	Poplar	0489	Norris, E. G.....	Cleveland
0671	Mund, J. F.....	Cleveland	0488	Norris, E. P.....	Cleveland
2122	Munn, H. E.....	Colton	0698	Norton, H. E.....	Ironton
0697	Munson, A. W.....	Forest	1312	Norwood, Theo. F....	Cincinnati
0675	Munson, L. D.....	Forest	0577	Nye, C. N.....	Canton
0154	Murdock, A. W....	Bellefontaine	1768	Nye, Harry L.....	Zanesville
2123	Murdock, J. G.....	Malvern	0721	O'Brien, Wm.....	Cleveland
1731	Murphy, J. J.....	Lima	1577	O'Connell, W. J....	Mingo Junction
0720	Murphy, John T....	Jamestown	1524	Odell, John.....	Delta
1781	Murphy, J. W....	Millidgeville	1544	Ogden, C. W.....	Port Jefferson
1095	Murphy, M. M.....	Ripley	0515	Ogden, E. N.....	Marietta
0284	Musselman, A.....	Saint Paris	1545	Ogden, L. C.....	Port Jefferson
1435	Mutchmore, W. M....	Columbus	0989	Ogier, J. M.....	Cambridge
1467	Myers, A.....	Hamilton	1648	Ohl, Eli J.....	Mineral Ridge
0528	Myers, F. M....	East Liverpool	1777	Ohler, Jacob, Jr..	Liberty Center
0108	Myers, Geo. S.....	Carey	0387	Ohlinger, L. P.....	Wooster
0529	Myers, J. A....	East Liverpool	2120	Okey, F. G.....	Caldwell
0903	Myers, K. N.....	Fremont	1177	Olmstead, F. E....	Millersburg
0248	Nace, M. T.....	New Lisbon	0530	Ong, A. R.....	Martin's Ferry
1340	Nace, Warren, J....	Deshler	0079	Ong, W. B.....	New Town
0347	Nachrieb, C. J.....	Wauseon	0496	Openheimer, John....	Canton
1554	Nagle, Altrud J....	Oak Harbor	0812	Opperman, E.....	Cleveland
0950	Nagler, W. M.....	Hopedale	2539	Orr, Samuel.....	Columbus
1507	Naylor, S. T.....	Canal Dover	0696	Osborn, R. L.....	Prospect
1210	Neale, E., Lincoln...	Gallipolis	1286	Otis, John C.....	Cincinnati
0830	Neff, B.....	New Carlisle	1275	Ott, Ferdinand.....	Cincinnati
1455	Negley, W. H.....	Wyoming	0349	Otten, Otto.....	Ironton
0847	Nelson, J. W.....	Springfield	0356	Overbeck, B. H., Jr.	Cincinnati

0202	Overholser, S. H.	West Manchester	1353	Pretzinger, H.	Dayton
1653	Owen, Alfred	Osceola	0875	Pretzinger, M.	Brookville
2518	Owen, Gomar D.	London	1354	Pretzinger, R.	Dayton
1446	Packer, A. J.	Ravenna	0156	Phillips, B. F.	North Jackson
1447	Packer, W. B.	Alliance	0340	Phillips, C. R.	Salem
0487	Page, H. M.	Bedford	0366	Phillips, C. W.	Cincinnati
1096	Palmer, J. G.	Conneaut	2046	Phillips, E. D.	Cincinnati
0274	Pape, Josephine	Sandusky	0620	Phillips, F. P.	Marengo
1287	Pardick, B. J.	Cincinnati	1496	Phillips, William	Beaver
0746	Park, W. H.	Elyria	1504	Pickett, John	Guysville
0644	Parker, A. G. S.	Struthers	0193	Piercy, C. G.	Wilshire
2173	Parker, Isaac	Chester Hill	1829	Plumly, A.	Barnesville
1457	Parker, Jas. D.	Bogart	1401	Plummer, Conrad	Sabina
0782	Parker, Marcus C.	Cleveland	1875	Pohlmeier, E. A.	Cincinnati
0610	Parker, W. R.	Beverly	1204	Pond, Geo. W.	Olena
0118	Parks, W. H.	Nelsonville	1041	Pond, W. F.	Warren
1657	Parrett, W. E.	Greenfield	0867	Pope, James	Clyde
2074	Parsons, A.	Gann	0868	Pope, M. A. F.	Clyde
0731	Parsons, Geo. F.	Troy	0713	Pope, R. W.	Woodsfield
0946	Parsons, R.	Cleveland	0657	Posten, C. E.	Nelsonville
2174	Patrick, H. W.	Vermillion	0945	Potter, E. J.	Sherwood
2084	Patrick, Malcom	Norwalk	1109	Potts, J. C.	Belleville
0415	Patterson, J. A.	St. Clairsville	0346	Price, A. Q.	Swanton
0414	Patterson, J. J.	St. Clairsville	1160	Probeck, Geo. J.	Cleveland
1178	Patterson, R. R.	Nelsonville	0573	Pugh, Geo. C.	Toronto
0881	Potts, T. L.	East Liverpool	0514	Pullin, A.	Barnesville
0780	Paul, F. M.	Basil	0278	Purdy, Thos. L.	Covington
0940	Payne, Chas. E.	Port Clinton	0562	Putnam, R.	Gann
1331	Pearce, B. L.	West Farmington	0402	Putt, A. H.	Canal Dover
0865	Pearce, J. O.	West Farmington	1523	Putt, L. P.	Canton
1011	Pearce, Leveret	McArthur	0147	Pyle, F. T.	Madison
2112	Pease, M. G.	Mason	0880	Pyle, S. B.	Richmond
2554	Peck, Erasmus D.	Toledo	1551	Quinn, J. W.	Hillsboro
1953	Peck, J. H.	Cleveland	0589	Quinlin, W. H.	Larime P. O.
0796	Peet, L. A.	Cleveland	0247	Rabe, H. H.	Clyde
0797	Peet, L. L.	Cleveland	1922	Raiff, J. K.	Millersburg
0858	Peltz, J. P.	Olmsted	0873	Rainsberger, A. C.	Sherrodsburg
0777	Penfield, J. N.	Elmore	1654	Rarey, A. M.	Groveport
1842	Penfield, S. J.	Columbus	1823	Rarey, F. S.	Columbus
0476	Perry, Charles F.	Cincinnati	0008	Rathburn, J. C.	Gallipolis
1659	Peters, E. J.	Akron	1532	Rauchkolb, John	Columbus
0687	Peters, V. O.	Shelby	0480	Rave, Herman	Cleveland
0431	Petersilge, Albert	Cleveland	1555	Rawden, Lucien	Windsor
1901	Peterson, Harry G.	Williamsburg	1608	Rawles, Jos. P.	Lebanon
1741	Pettit, B. S.	Hicksville	0429	Rea, D. F.	Zanesville
1740	Pettit, E. M.	Hicksville	0640	Read, J. A.	Wauseon
0066	Payton, W. T.	Manchester	0641	Read, M. E.	Wauseon
0963	Pfunder, John	Marshallville	2548	Reahard, T. M.	Wilmington
0964	Pfunder, L. P.	Marshallville	1638	Reakirt, Chas. C., Jr.	Cincinnati
1548	Phelps, Lyman C.	Andover	2036	Reakirt, John W.	Cincinnati
1802	Phenegar, B. H.	Columbus	2011	Ream, John C.	Dayton
1804	Pheneger, J. W.	Columbus	1981	Ream, L. M.	Washington C. H.
0627	Plants, T.	Crestline	0905	Ream, O. B.	Somerset
0351	Prame, F. J.	Shiloh	1157	Reasoner, M. D.	Bellaire
1262	Pratt, E. S.	Geneva	1821	Reber, B. C.	Logan

1822	Reber, R. A.....	Logan	0332	Robinson, W. W.....	Bellaire
0448	Reed, C. D.....	Pomeroy	1748	Robison, E. J.....	London
0896	Reed, D.....	Pomeroy	1911	Rockey, John.....	Chatfield
0766	Reed, Enos.....	Portsmouth	2551	Rockwood, C. H.....	North Amherst
1270	Reed, G. P.....	Ravenna	0093	Rodgers, N. P.....	Kingston
1377	Reed, I. N.....	Toledo	1442	Roe, R. B.....	Elyria
1238	Reed, P. H.....	Hayesville	0844	Roedell, G. A.....	Gallipolis
0042	Reed, P. R.....	Agosta	1179	Rodgers, Chas.....	Bowling Green
1546	Reed, W. M.....	Agosta	0764	Rodgers, J. A.....	Kenton
0916	Reeder, W. W.....	West Cairo	2091	Rodgers, J. H.....	Louisville
2541	Reeg, Adam.....	Portsmouth	1779	Rogers, T. C.....	Wellston
0646	Rees, J. N.....	South Charleston	1349	Roller, J. L.....	Toledo
2001	Reiber, A.....	Pleasant Hill	0342	Roller, U. D.....	Minerva
6718	Reid, Henry.....	Lebanon	1689	Roller, R. S.....	Wooster
0447	Reinert, Lewis.....	Columbus	1981	Rood, M. N.....	Mt. Cory
2130	Reinhart, W. H.....	Polk	2189	Rose, D. E.....	Adelphi
0020	Reisinger, L. K.....	Galion	1594	Rosebraugh, A. W.....	Newark
0271	Rempel, Ferdinand.....	Logan	1593	Rosebraugh, J. B.....	Newark
0369	Rendigs, Chas. P.....	Cincinnati	1212	Rosewater, Nathan.....	Cleveland
0301	Resley, Lyman.....	Gann	1345	Rosselott, H. F.....	Buford
0177	Reul, W. W.....	Delphos	0455	Ross, J. D.....	Wadsworth
1760	Reynolds, G. E.....	Fostoria	2110	Roth, Frank M.....	Norwalk
0719	Reynolds, J. A.....	Addison	1744	Roudabush D.....	Goshen
0723	Rhoades, E.....	Solon	0910	Rouse, J. H.....	Columbus
0938	Rhoads, W. L.....	Ashland	1513	Rouse, E. H.....	Columbus
0433	Rice, B. T.....	Newton Falls	0915	Roush, A. H.....	Syracuse
0542	Rice, Wm. L.....	Columbus	0430	Rowland, T. H.....	Oberlin
1628	Richard, A. J.....	Marietta	1225	Rudasill, C. H.....	Rushsylvania
1838	Richards, J. W.....	Columbus	1682	Ruder, E. G.....	Hamilton
0693	Richardson, S. M.....	Metamora	1957	Ruggles, R. R.....	Cleveland
0080	Richardson, W. S.....	Clarington	0855	Rulmann, R. A.....	Minster
0297	Richey, G. C.....	Scio	1863	Rumsbaugh, D. W.....	Greenwich
0536	Richey, L. W.....	New Paris	1258	Rumnell, James.....	Wharton
0121	Richey, S. C.....	Oxford	1497	Rummel, J. H.....	Lucas
0343	Richter, Sam'l F.....	Philo, P. O.	1506	Rupp, John W.....	Waterville
0843	Rickseeker, David.....	Navarre	0367	Ruppert, John.....	Cincinnati
1747	Riddle, W. H.....	London	1574	Rusk, Daniel.....	Malta
1751	Ridgley, W. F.....	Steubenville	0410	Russell, A. W.....	North Bloomfield
1139	Ridgway, B. G.....	Cedarville	1037	Russell, C. M.....	West Unity
1043	Ridgway, Chas.....	Yellow Springs	2121	Russell, W. H.....	Mt. Oreb
1044	Ridgway, C. M.....	Yellow Springs	1151	Russell, W. H.....	Kingston
0519	Riley, E. D.....	Paris	0533	Rust, B. S.....	Cincinnati
1379	Rissler, E. T.....	New Livingston	1288	Rutenick, John.....	Cincinnati
0265	Ritter, Louis F.....	Columbus	0244	Ryan, W. J.....	Junction City
2093	Roach, John T.....	Morrow	1601	Rynard, N. B.....	Kent
0116	Robb, Lucian B.....	Cincinnati	0094	Safford, E. R.....	Chillicothe
0437	Roberts, John S.....	Columbus	2182	Sager, N.....	Herring
2175	Roberts, W. B.....	Columbus Grove	1203	Salisbury, T. N.....	Russellville
0262	Roberts, W. P.....	Sunbury	1690	Salkeld, G. M.....	Perry
2161	Robinson, Alfred.....	Arabia	1336	Saltsman, Wm. A.....	Salineville
1847	Robinson, J. C.....	Mifflin	1332	Samsel, H. S.....	Bloomville
0219	Robinson, J. E.....	Bellaire	0368	Sander, August.....	Cincinnati
1609	Robinson, John.....	Green Spring	1660	Sander, John M.....	Akron
0733	Robinson, John P.....	Batavia	0600	Sanders, C.....	Metamora
0131	Robinson, P. H., Washington C. H		1469	Sands, J.....	Waynesville

1572	Sanford, C. A.	Middlefield	0473	Seebaha, A. W.	Pomeroy
0707	Sanford, W. R.	Brookville	1711	Seeds, S. M.	Commercial Point
1780	Sanns, James H.	Gallipolis	2171	Seely, H. B.	Jerome
1209	Sanns, P. A.	Gallipolis	0588	Seltzer, S. T.	Columbus
0304	Sargent, A. L.	Delta	1104	Seltzer, Daniel F.	Akron
0917	Sargent, H. H.	Monroeville	2030	Serodino, Herman	Cincinnati
0305	Sargent, M. S.	Delta	1080	Seufert, John	Cleveland
1183	Sargent, S. C.	Piketon	2028	Seufert, Max J.	Cincinnati
0401	Satterly, H. B.	Orwell	2127	Seward, J. A.	Perryton
0373	Sauer, Louis W.	Cincinnati	2126	Seward, J. F.	Perryton
1982	Saunders, H. G.	Killbuck	0398	Sexauer, F. E.	Sulphur Springs
0929	Saur, J. C.	Napoleon	1346	Seybert, R. L.	Hillsboro
0582	Savidge, G. A.	McClutchenville	0282	Shafer, C. M.	Canal Fulton
1902	Sayre, Wm. M.	Letart	0007	Shallcross, J. H.	Gallipolis
0203	Schaafl, J. H.	Gallipolis	2552	Shanafelt, Fred. M.	Greentown
1119	Schaefer, August.	Cincinnati	1773	Sharp, A. J.	Ada
1141	Schaeffer, F. N.	Germantown	0299	Sharp, D. W.	Woodstock
1697	Schaffner, Chas. F.	Norwalk	1772	Sharp, John	Ada
0552	Schamps, Geo. M.	Cleveland	0960	Sharp, W. T.	Cadiz
0445	Schellentrager, E. A.	Cleveland	1026	Sharpless, P. O.	Marion
1565	Schick, Adam.	New Berlin	1208	Shaw, E. S.	Windham
0807	Schiller, G.	Petersburg	0258	Shaw, Frank K.	Cardington
0806	Schiller, John H.	Petersburg	0310	Shaw, George.	Danville
1335	Schilling, J. P.	Louisville	0624	Shaw, James, S.	Cardington
2503	Schindler, Chas.	Toledo	1966	Shay, Marshal L.	Cleveland
0794	Schindler, Joseph.	Toledo	0874	Sheekley, C. W.	Cleveland
1530	Schirm, James.	Pickerington	1735	Shelden, Frank D.	Burton
1327	Schmidt, Adam.	Springfield	0544	Shepared, J. S.	Nelsonville
1320	Schmidter, F. X.	Cincinnati	1539	Shepler, E.	Cambridge
0460	Schmidt, Carl.	Brooklyn Village	0770	Sherwood, D. W.	Cleveland
1962	Schmidt, J. J.	Brooklyn Village	0887	Sherwood, L. W.	Columbus
2179	Schneider, Mrs. E.	Minster	1592	Shields, W. R.	Newcomerstown
1214	Schmetzler, John B.	Archbold	2058	Shipley, R. S.	Burgoon
1995	Schroeder, Geo. A.	Cleveland	1923	Shriver, S. C. C.	Shawnee
1232	Schoehut, Christie H.	Cleveland	1708	Shuey, Lewis L.	Fairfield
0293	Scholl, Jacob, J.	Toledo	0002	Shuesler, John J.	Loveland
0292	Scholl, Joseph.	Toledo	1202	Sidwell, G. E.	Russellville
0787	Schooly, A.	Somerton	0063	Siegenthaler, H. N.	Springfield
0323	Schuckers, J. M.	Massillon	1049	Sillik, M.	Vanlue
0050	Schueller, Aug. W.	Columbus	0921	Simmons, A. H.	Conneaut
0017	Schueller, Fred. W.	Columbus	1705	Simons, A. L.	Kirkersville
2504	Schueller, Orloff W.	Cincinnati	0169	Simmons, H. H.	Kirkersville
0206	Schueller, Ernst.	Columbus	2167	Simons, B. F.	West Millgrove
1276	Schuler, Wm. C.	Cincinnati	1148	Simons, Chas. P.	Caldwell
0220	Schultz, B. F.	West Salem	2162	Simons, H. G.	Macksburg
1005	Schwartz, John C.	Hamilton	0922	Simons, H. W.	Conneaut
1077	Schwartz, Fred. W.	Columbus	1067	Sinclair, A. H.	Beallsville
1018	Scoby, C. H.	Hamilton	1020	Sisson, G. W.	McArthur
1853	Scofield, L. F.	Lilly Chapel	0814	Skeggs, C. W.	Green Spring
0113	Scott, A. C.	Columbus	2147	Skellenger, A. D.	New London
2031	Scott, A. W.	Cincinnati	1895	Slack, A. V.	Graysville
1449	Scott, Edward.	Waynesburgh	0752	Slack, Fred. M.	Cleveland
0110	Scott, John.	Hilliards	0686	Slater, J. W.	Ironton
2034	Scott, John L.	Defiance	0194	Slocum, E. L.	Lancaster
1181	Searl, F. A.	Painesville	0882	Slosson, F. W.	Cleveland

1622	Smith, A. F.....	Arcanum	2526	Spohn, Robt. C.....	Toledo
1236	Smith, Carl W.....	Newton Falls	0097	Sproat, Frank.....	Chillicothe
1565	Smith, Chas. P.....	Creston	0098	Sproat, James.....	Chillicothe
0668	Smith, C. W.....	Collinwood	0928	Spry, Daniel R.....	Portsmouth
1393	Smith, Edward A.....	Warren	0508	Squire, D. N.....	Ashville
1444	Smith, E. D. F.....	West Richfield	0412	Stableton, D. J.....	Manchester
1443	Smith, E. T.....	Richfield	1857	Stahl, John V.....	Greenford
1382	Smith, F.....	Cheshire	1290	Stammel, Chas. A....	Cincinnati
1604	Smith, Geo. W.....	Cincinnati	0334	Stammel, E. W.....	Cincinnati
0653	Smith, Jerome.....	Mt. Blanchard	0345	Stansbury, W. E.....	Middleport
0560	Smith, J. D.....	Gann	1502	Stanley, A. D.....	Lowell
0260	Smith, Joseph.....	Austintown	0267	Starbird, B. F.....	New London
1512	Smith, J. B.....	Chester	0266	Starbird, C.....	New London
1398	Smith, Kirby.....	Hillsboro	0531	Star, N. U.....	Delaware
0331	Smith, L. W.....	Byesville	1313	Strasburg, Fred.....	Cincinnati
0014	Smith, R. W.....	Alexandria	0501	Staunsmyer, C.....	Fremont
1339	Smith, T. Ed.....	Cincinnati	1261	Stecker, Henry W....	Cleveland
1180	Smith, W. F.....	Painesville	1451	Steele, C. H.....	Steubenville
1399	Smith, W. G.....	Hillsboro	1840	Steele, E. M.....	Steubenville
0420	Smith, W. H.....	Howard	1567	Steele, W. C.....	New Berlin
1264	Smith, Wm. M.....	Coshocton	1480	Steele, W. W.....	Chillicothe
1400	Smith, W. R.....	Hillsboro	0044	Steely, E. A.....	Anna
1416	Smith, W. T.....	Springfield	1590	Steese, C. W.....	Lake
0065	Smithnight, Albert....	Cleveland	0399	Steever, H. C.....	Cincinnati
0064	Smithnight, Louis....	Cleveland	1675	Stein, F. L.....	Norwalk
1938	Snear, F. A.....	Stryker	1615	Steinbacher, E.....	Akron
1478	Snyder, W. A.....	Evansport	2521	Steinbrueck, Otto....	Toledo
1361	Snodgrass, W. W.....	Kenton	1319	Steineck, H. G.....	Cincinnati
2187	Snow, A. G.....	Negly	1314	Steineck, Joseph F....	Cincinnati
0092	Snyder, A. L.....	Bryan	0629	Steinhoff, Adolph....	Fort Jennings
2527	Snyder, D. J.....	Scio	2192	Steinhoff, W. S.....	Columbus
1818	Snyder, G. N.....	La Grange	0849	Steinkamp, J. G.....	Elmore
1764	Snyder, H. H.....	London	1663	Stem, D. W.....	Savannah
1920	Snyder, J. S.....	Macksburg	0146	Stemen, S. A.....	Elida
0021	Sollmann, L.....	Canton	0374	Stenger, Edward....	Cincinnati
0802	Somers, G. Horace....	Akron	1289	Stephan, August....	Cincinnati
0596	Sords, Thos. V.....	Cleveland	1620	Stephens, J. C.....	Ashland
2043	Spamer, Hugo.....	Cincinnati	1337	Sterling, S. L.....	Carrollton
0372	Spangenberg, E.....	Cincinnati	1338	Sterling, M. C.....	Carrollton
0505	Spangler, Geo.....	Burbank	1569	Sterrett, John A.....	Troy
0416	Spaulding, C. D.....	Galion	0175	Stevens, John.....	Johnstown
0790	Spayd, C. E.....	Toledo	1249	Stevenson, L. K....	West Unity
0793	Spayd, H. W.....	Toledo	1425	Stevic, T. M.....	Shiloh
0648	Sprague, J. Arthur....	Toledo	1726	Stewart, A. H.....	Brookfield
0167	Sprague, L. C.....	Pemberville	1977	Stewart, Chas.....	Ashville
2095	Speker, P. W.....	Botkins	1125	Stewart, J. E.....	Brookfield
1427	Spencer, C. A.....	Crestline	2080	Stewart, Geo. E.....	Cadwallader
0249	Spencer, Henry.....	New Straitsville	1378	Stewart, H. W.....	Steubenville
0205	Spengler, J. G.....	Dayton	0673	Stewart, J. K.....	Auburn
0270	Spencer, John Geo....	Cleveland	1240	Stewart, R. F.....	East Liverpool
0269	Spencer, M. H.....	Cleveland	1825	St. John, I. L.....	Tiffin
0805	Spiker, C. A.....	Tippecanoe	1763	Stockham, A. H.....	Madison
0268	Spencer, P. I.....	Cleveland	0608	Stierle, J. G.....	Versailles
1166	Spith, Wm. F.....	Cleveland	1703	Stilson, S. B.....	Gibsonburg
0876	Spitler, Samuel.....	Brookville	0424	Stitt, J. Y.....	Bloomington

1268	Stockman, H. S....	Loudonville	1076	Thomen, A. A.....	Columbus
1454	Stockman, H. T....	Loudonville	1687	Thompson, A.M.	Columbus Grove
1889	Stockon, M.	Carrollton	1260	Thompson, H. W.....	Sidney
0734	Stockwell, E.....	Quincy	0295	Thompson, R. A.....	Kent
0439	Stokes, C. C....	West Middleburg	0434	Thorp, Abner.....	Cincinnati
0109	Stone, L. B.....	Belpre	1769	Thorp, J. B.....	Midland City
0820	Stoskopff, George....	Cleveland	0966	Thuma, J. W.....	Shaucks
1900	Stover, H. F.....	Dayton	2506	Thurston, Azor....	Grand Rapids
2060	Stover, I. S.....	Dayton	0613	Thyme, Henry.....	Uhrichsville
0971	Strawser, D. S.....	Adelphi	0574	Tielke, Gustav.....	Cleveland
1756	Strayer, D. W.....	De Graff	0884	Tielke, Henry.....	Cleveland
0387	Strickland, Dwight.....	Niles	0158	Tiffany, H. B.....	Clyde
0148	Strong, Finney.....	Wilkesville	0686	Tilly, Wm.....	Cincinnati
0572	Strong, R. B.....	Jamestown	1929	Timmermann, J. D.....	Leipsic
1000	Stroedter, Ernst....	Columbus	2129	Tipson, T. C.....	Williamsport
0069	Strock, E. E.....	Cleveland	1542	Titsworth, R. L....	Mt. Victory
1598	Strome, J. J.....	Millersburg	0463	Tobey, Chas. W.....	Troy
1478	Stubbs, N. B.....	Stryker	1627	Tobey, Nathaniel.....	Troy
1954	Stuckenholt, W. H.	Cleveland	2071	Todd, H. F.....	Montgomery
0393	Stumm, R. C.....	Wilmington	0341	Todd, James F....	Columbiana
2154	Sturgeon, G. W. N.	Georgetown	1942	Tompkins, J. S....	Avondale
0707	Sturgis, J. R.....	Dalton	1128	Town, Robt. M.....	Bethel
1892	Stutz, Frank A....	Upper Sandusky	0226	Townsend, P. A.....	Windsor
1528	Styer, Wm. H.....	Marietta	0932	Trader, A. J.....	Dennison
0027	Sulliger, Wm. R. H....	Forrest	1048	Treece, Gilbert.....	Vanlue
2020	Sutterfield, C. W.	West Union	0593	Trembley, J. S....	Fazeysburg
2501	Sulzbacher, Wm. F.	Chillicothe	0594	Trembley, Thos. G.	Fazeysburg
0325	Swan, C. D.....	Orville	1919	Triem, Theo.....	Portage
1610	Swan, Wm. S.....	South Toledo	0152	Trimble, Frank F....	Salem
1611	Swan, Mrs. Wm. S....	South Toledo	0872	Trimble, O. T.....	Urbana
0635	Swayer, J. W.....	Cleveland	0151	Trimble, Robt. P....	Salem
0318	Swift, Chas. E.....	Ashtabula	1253	Trisler, L. W.....	Highland
0526	Swift, R. B.....	Kingsville	1550	Troupe, Theo.....	Springfield
1007	Swingle, Jas. L....	Mt. Gilead	1257	Troyer, Levi D....	Shanesville
1197	Sykes, Otis....	Chicago Junction	1933	Truesdale, Wm. F....	Jasper
0061	Taggart, P. S....	New Lexington	1453	Tschanen, G. W....	Upper Sandusky
1211	Tallance, Wm. T. A..	Syracuse	1452	Tschanen, W. T....	Upper Sandusky
1636	Taylor, A. J.....	South Toledo	0815	Tucker, J. C.....	Green Spring
0057	Taylor, C. C.....	Perrysburg	1650	Tulloss, B. L.....	Akron
0256	Taylor, Edwin.....	Coolville	1029	Tupa, F. J.....	Cleveland
2500	Taylor, F. S.....	Wilmington	1737	Turner, Mrs. J. H....	Shreve
1641	Taylor, H. B.....	Bryan	1896	Turner, R. K....	Rushville
1861	Taylor, J. B.....	Ai	1529	Turney, L. M.....	Holgate
0564	Taylor, J. D.....	Roseville	1510	Tuttle, F. A.....	Jefferson
0164	Taylor, J. P.....	Mechanicsburg	0571	Tyson, L. B.....	Kenton
0255	Taylor, M. E.....	Coolville	1516	Ullman, W. P....	Loudonville
1655	Taylor, U. B.....	Maumee	1930	Umbenhaur, H. C....	Hicks ville
1138	Taylor, Wm.....	West Mecca	1517	Uncapher, D. K.....	Salem
1230	Taylor, W. S.....	Bryan	1108	Underwood, J. W.	Bowling Green
0541	Taylor, Z. R....	West Jefferson	0553	Urban, J. P.....	Cleveland
1483	Terrell, Elliott....	North Ridgeville	2565	Urban, Theo.....	Cleveland
0212	Thayer, L. H.....	Youngstown	1522	Uthoff, J. H. H.....	Genoa
0117	Thomas, C. A.....	Rushville	0231	Utley, Judson.....	Galena
0130	Thomas, C. G.....	Delaware	1111	Valentine, R. H....	Belle Center
0126	Thomas, E. Stanley..	Fremont	0075	Vance, E. P.....	Westerville

112	Vaughn, Frank.....	Osborn	2007	Webb, M. W.....	Springfield
0768	Van Gorder, C. M.....	Warren	1380	Webber, T. J.....	Plymouth
1788	Van Gorder, H. L.	Warren	0567	Webber, Chas. L.....	Canton
1343	Van Law, J. D.....	Bellaire	0140	Webster, D. E.....	Lowellville
1885	Van Stone, Thos.	Toledo	2186	Webster, J. V.....	Flushing
1946	Van Valkenburg, A. T..	Spencer	1075	Weed, T. R.....	Cheshire
1673	Van Voorhis, J. E....	Martinsburg	1277	Weeks, B. F.....	Cincinnati
1926	Vance, C.	Shane's Crossing	0821	Weeks, G. W.....	Belmore
0091	Vetter, A. C.....	Sardis	0314	Weiler, J. J.....	Cleveland
2029	Vieth, Wm.....	Cincinnati	1106	Weirich, Israel....	Martins Ferry
1304	Vilter, Herman.....	Cincinnati	0326	Weis, Chas. F.....	Dayton
0312	Virden, M. H.....	La Rue	1021	Weis, Henry F.....	Dayton
1904	Vocke, J. F....	Loramie P. O.	0458	Weis, H. L.....	Dayton
1059	Vogel, A. A.....	Columbus	0584	Weisbrodt, Gus....	Middletown
0038	Vogt, A. L.....	Delaware	2140	Weisner, A. H.....	Berlin Center
1432	Vogt, D. F.....	Cleveland	1800	Weller, A.....	DeGraff
1074	Voigt, F. H.....	Holgate	1185	Weller, F. B.....	Jackson Center
2081	Volka, C.....	Lafayette	0081	Weller, W. A.....	Zanesville
0082	Vollnogle, P. F....	New Waterford	1630	Wellons, J. W.....	Barnesville
1538	Von Mural, R.....	Tiltonsville	1629	Wellons, S. G.....	Barnesville
1039	Von Stein, J. X....	Upper Sandusky	1269	Wells, H. C.....	Wellsville
1292	Vortkamp, H. F.....	Milford	0010	Wells, H. E.....	Bridgeport
1291	Voss, Geo. W.....	Cincinnati	1317	Wells, J. D.....	Cincinnati
0040	Wagner, C. W.....	Mansfield	1057	Wells, W. P.....	Zanesville
0692	Wagner, E.....	Zaleski	0122	Wells, W. P....	New Philadelphia
1315	Wagner, Henry	Cincinnati	1227	Wenning, Gus. H....	Cincinnati
1296	Wagner, John C....	Cincinnati	1459	Werner, John J.....	Stoutsville
0043	Wahmhoff, John H....	Delphos	0400	Werner, W. M.....	Painesville
0789	Walborn, Frank L....	Miamisburg	2133	Wertz, W. H. H.....	Dalton
0004	Walker, J. B....	Williamsburgh	2531	West, C.....	Toledo
1371	Walker, J. B.....	Seville	2019	West, Fairfax....	Lees Creek
0012	Walker, W. P....	Washingtonville	0962	West, J. E.	St. Clairsville
1224	Walker, W. W....	Wilmington	0335	West, W. K.....	Toledo
0221	Walker, W. R.....	Batavia	2550	West, W. L....	New Matamoras
1876	Wall, Andrew.....	Cambridge	0677	West, Brook A. E.....	Ashley
1015	Wall, C. L....	Cambridge	1305	Wetterstroem, Albert.	Cincinnati
1440	Wallace, A. C....	Bellefontaine	0647	Wetzel, Geo. H.....	Lancaster
0184	Walt, E. C.....	Marion	0585	Weusthoff, Otto S....	Dayton
0623	Walton, Harry C....	Cincinnati	1294	Weyer, John....	Cincinnati
3561	Ware, J. M.....	North Lewisburg	0086	Wheeler, A. F.....	Lima
0926	Warfield, James F....	Ironton	1165	Whedom, John.....	Hudson
1272	Warner, Augustus.....	Akron	1085	White, A. J.....	Mansfield
0736	Warner, A. C.....	Tiffin	0030	White, E. B.....	Lancaster
1843	Warren, J. B.....	Mt. Vernon	0025	White, J. B.....	Bellaire
1003	Waterman, H.	Ravenna	0612	White, J. W.....	Uhrichsville
2004	Waterman, Homer C..	Zanesville	0509	White, T. R.....	Trimble
1273	Watkins, S. S.....	Columbus	0795	White, W. E.....	Middlepoint
0827	Warwick, John B....	Lucasville	2558	Whitehead, R. W....	Youngstown
0313	Watts, C. D.....	Broadway	0559	Whitmer, R. T.....	Thornville
1856	Weatherbee, J. A....	Nashville	2055	Whittaker, John.....	Camden
1120	Weatherhead, R. H....	Cincinnati	0223	Wickoff, H. G....	Chagrin Falls
0303	Weaver, A.....	Greenville	0590	Widney, H. M.....	Zanesville
0601	Weaver, J. A.....	Montpelier	1893	Wiest, Chas. E.....	Conneaut
0302	Weaver, J. G.....	Greenville	1894	Wiest, S. G.....	Ashland
1586	Weaver, D. S.....	Appleton	1439	Wilcox, H. L.....	Cleveland

0976	Wildenthaler, G. A....Sandusky	0727	Woodward, Nelson G...Defiance
1490	Wiefert, Ernst.....Cincinnati	1849	Wooster, N. P.....Elyria
2547	Wilkenson, E. L.....Van Wert	1625	Wooster, A. R.....Wellington
0804	Wilkens, D. F....Locust Grove	1848	Wooster, W. F.....Elyria
0956	Willamen, E. P....Smithville	1072	Wooster, T. S.....Norwalk
0133	Williams, E. R.....Nevada	0744	Worley, Geo.....Covington
1947	Williams, C. M.....Wellston	0743	Worley, T. A.....Covington
0482	Williams, R. G.....Alliance	2143	Worthington, A. F....Cincinnati
0663	Wilson, Albert.....Sidney	0383	Worthington, C. D....Killbuck
0998	Wilson, A. C.....Piqua	1293	Wrede, Henry.....Cincinnati
0925	Wilson, D. C.....Ironton	0160	Wright, F. G.....Defiance
0277	Wilson, H. C.....Wellston	0039	Wright, Henry.....Belmont
1723	Wilson, Israel.....Cincinnati	1798	Wright, J. M.....Gillespieville
0605	Wilson, T. G.....Barnesville	1985	Wright, J. M.....Steuben
0625	Wilson, W. A.....Wooster	1916	Wright, J. N.....Raymonds
0625	Wilson, Wm.,.....Lexington	1531	Wright, L. E.....Pickerington
1218	Wilson, W. C.....Clarkson	0009	Wright, W. C.....Cleveland
1219	Winbigler, J. M....Jeromeville	1564	Wright, S. V.....Lyndon
0435	Winkleman, G. H....Cincinnati	1939	Wyatt, B.....Edgerton
0737	Winkler, W. H....Apple Creek	1201	Wyrick, C. M.....Bellaire
0469	Winters, Aaron.....Ironton	2073	Yant, Isaac.....Dell Roy
0952	Wisterman, I...Shanes Crossing	0405	Yarnell, Geo. M....Senecaville
0380	Witherstine, H. A.....Nova	1436	Yeogley, W. C...New Somerset
1559	Witte, L. H.....Cleveland	0561	Yerian, Fred.....Sharon
2018	Wittenbrook, C. H....Masterton	2045	Yorston, Matthew M..Cincinnati
1295	Wittstein, Chas.....Cincinnati	0729	Young, Anderson, J....Leipsic
0936	Witzeman, A. J.....Leetonia	2155	Young, J. H.....Somerville
2051	Wochoer, Chas. F.....Cincinnati	2553	Young, L. A.....Toledo
1297	Woesten, A. F.....Cincinnati	1092	Zartman, D.....Butler P. O.
0442	Wohlgemuth, A.....Cincinnati	2083	Zay, George.....Celina
1103	Wolf, C. P.....Wilnot	2062	Zeller, Abia.....Dayton
1591	Wolf, Simon.....Fremont	1259	Zickes, Otto.....Cleveland
1102	Wolf, Samuel.....Wilnot	0566	Zimmerman, John.....Wooster
1742	Wolf, S. S.....Adelphi	0385	Zimmerman, J. R.....Wooster
1914	Wood, Fred.....Peninsula	1121	Zuenkeler, J. Ferd....Cincinnati
2141	Wood, I. V.....Chesterville	0033	Zwerner, J. Adam....Columbus
0783	Woods, W. J.....Mt. Sterling	0034	Zwerner, J. F.....Marysville
1606	Woodrow, W. C.....Hillsboro		

REGISTERED ASSISTANT PHARMACISTS.

057	Ackeret, Theo. C.....	Massillon	063	Brandel, John J.....	Portsmouth
059	Ackley, J. W.....	Granville	098	Breaden, William ...	Youngstown
028	Adams, Geo. M.....	Oxford	081	Brenner, Chas. E.	Lima
112	Aigin, S. C.....	Delaware	178	Brister, J. S.....	Canal Dover
149	Akeroyd, Geo. J.....	Dresden	611	Brooks, Fred. A.....	Cleveland
388	Alexander, E. V.....	McConnellsville	605	Buescher, Fred. W....	Alliance
134	Allen, B. F.....	Belletontaine	071	Burdsal, Edward H....	Cincinnati
282	Allen, Chas. L.....	Cleveland	0157	Burrows, A.....	West Jefferson
391	Allison, E. H.....	Eaton	333	Burt, T. D.....	Columbus
232	Allright, B. F.....	Bryan	394	Byard, Grant.....	Warren
457	Altenberger, P. J.,	Upper Sandusky	313	Cahoe, C. A.....	Toledo
276	Amann, C. E.....	Portsmouth	354	Caldwell, E. B.....	Mansfield
060	Amann, Frank O.....	Sidney	143	Carpenter, Anna.....	Delhi
146	Andrews, Lucy T.....	Cortland	385	Carr, Bert. E.....	Liverpool
055	Armbruster, G. E.....	Logan	129	Carter, E. L.....	Bryan
272	Arnold, H. E.....	Cambridge	066	Case, W. H.....	Kent
304	Ashton, Ruth A.....	Lima	208	Cassaday, F. V.....	Alliance
377	Austin, Lulu.....	Plymouth	207	Cassaday, O. U.....	Alliance
603	Baker, W. H.....	Shanesville	400	Chambers, G. A.....	Mt. Pleasant
459	Bailie, Chas. S.....	Cleveland	032	Chambers, Sam. V....	Marion
279	Bailey, Mrs. M.....	East Toledo	446	Chapman, G. H.....	Zanesville
147	Bair, J. G.....	Freepport	216	Charles, Xenophon F....	Republic
455	Baird, W. E.....	East Springfield	360	Chestnut, Chas. S....	Chillicothe
416	Barnum, J. R.....	Stryker	312	Clark, Ulyssis E.....	Xenia
358	Barr, W. B.....	Steubenville	180	Clewers, W. F.....	Jackson
114	Barrett, W. R.....	Shawnee	015	Clobitz, Edward.....	Cleveland
289	Barry, George.....	Canton	004	Coblentz, Guy.....	Springfield
200	Bartholow, J. W.....	Newark	221	Cockerill, William....	Cleveland
292	Bartlett, Estella....	Cleveland	602	Collins, E. A.....	Wauseon
036	Bartley, F. A.....	Harrisonville	410	Colwell, Frank F.....	Urbana
119	Barton, David A.....	Gallipolis	615	Conner, A. W.....	Cambridge
247	Battles, W. P.....	Ashtabula	120	Conrad, F. W.....	Toledo
233	Baumhard, C. C.....	Vermillion	267	Cook, E. A.....	Chardon
166	Beckwith, James Z.....	Malta	328	Cook, E. S.....	Columbus
432	Bell, Robert M.....	Cincinnati	022	Corwin, B. B.....	Sparta
290	Bentley, S. O.....	Newark	356	Cowden, J. W.....	Poland
458	Billhardt, A., Jr.	Upper Sandusky	068	Crabbe, H. J.....	Greenville
....	Bishop, Will A.	Norwalk	237	Crane, Amelia B.....	Greensburg
123	Black, F. W.....	Cleveland	464	Crane, Della V. B.....	Iberia
422	Blackmore, Geo.....	Painesville	154	Crawford, J. W.....	Richwood
160	Blake, Chas. E.....	Canton	126	Crossland, J. D....	St. Clairsville
295	Bleckner, Charles....	Oak Harbor	011	Crowther, C. I.....	Conneaut
438	Bliler, Milton.....	Canal Fulton	125	Crumaker, O. H. P....	Chandlersville
460	Boessler.....	Cincinnati	175	Culler, F. W.....	Cleveland
395	Borer, Henry J.....	Wapakoneta	188	Curry, W. J.....	East Liverpool
067	Bourgeois, Chas.....	Canton	107	Darrah, Ida G.....	Bellaire
191	Bowersock, C. H.....	Columbus	048	Davis, Jesse.....	Jeffersonville
079	Boyd, S. H.....	Wooster	109	Davis, L. M.....	Cleveland
266	Boyer, Henry.....	Columbus Grove	287	Davis, Williard H....	Lowell
461	Brady, Frank S.....	Cleveland	291	Davis, W. H. C.....	Hillsboro

117	Dean, J. W.....	Columbus	445	Griffin, James P..	Springborough
039	Deemer, Chas. H....	New Lisbon	606	Grosse, G. M.....	Cleveland
141	DeRhodes, Frank..	Salem	452	Guiney, Ella E....	Waynesburgh
159	Dischinger, Fred A....	Toledo	431	Gunder, W. H.....	Arcanum
428	Dodd, Mrs. Mattie J..	Dell Roy	216	Hager, James A.....	Portsmouth
262	Doll, Tonie C.....	St. Mary's	151	Hague, E. U.....	Elyria
056	Donnan, E. V.....	Washington C.H.	189	Hair, Conradine J....	Alliance
306	Doran, Isaac A.....	Rushsylvania	612	Hale, Pierre J.....	Belpre
307	Dubois, C. J.....	Dayton	065	Hamilton, Harry A..	Perrysburgh
220	Dull, L. E.....	Forest	046	Hamilton, W. O.....	Wellsville
268	Duplor, W.....	Glouster	281	Hannah, Henry K....	Georgetown
101	Eichler, W.....	Cincinnati	184	Hannan, J. R.....	Ironton
430	Ellis, T. B.....	Washington C. H.	376	Harrison, M. T.....	Paulding
320	Elwell, W. M.....	Zanesville	309	Harter, Chas. B.....	Steubenville
031	Elwood, Harry S....	Leesburgh	434	Hathaway, C. W.....	Painesville
185	Enslin, Abert F.....	Cincinnati	007	Hauck, A. C.....	Columbus Grove
121	Epley, Chas.....	Canal Winchester	161	Hauser, William.....	Sandusky
044	Ernst, John.....	Mechanicsburg	082	Hawley, E. B.....	Arcanum
343	Fee, Wm. J., Jr.....	Cincinnati	420	Hays, Fred.....	Fostoria
...	Fella, F. J.....	Toledo	115	Headley, J. W.....	Marion
361	Ferguson, Frank.....	Defiance	359	Hearson, Frank E....	Monroeville
164	Fielder, Geo. W.....	St. Paris	037	Heing, Wm. H.....	Toledo
225	Fisher, H. W.....	Hamilton	283	Hellyer, S. B.....	Steubenville
078	Fitch, E. O.....	Burgh Hill	094	Henkelman, Henry K..	Sandusky
042	Flanders, John W....	Portsmouth	235	Hildreth, Mary A.....	Cheviot
234	Foerst, Wm. J.....	Cincinnati	334	Hines, C. E.....	Van Wert
454	Foertmeyer, Wm. L ..	Cincinnati	013	Hines, J. B.....	Van Wert
171	Fogle, B. J.....	Toronto	614	Herpich, John L.....	Columbus
466	Fogle, M. S.....	Cleveland	209	Huberman, W. H.	Marion
227	Ford, F. E.....	Middlefield	437	Hochstetler, J. C....	Doylestown
412	Ford, L. A.....	Wakeman	224	Holderman, W. S....	Amanda
153	Fortlage, J. H.....	Cleveland	102	Hoffman, Julius.....	Cincinnati
155	Foster, James.....	Cleveland	093	Hoffner, Frank J.....	Oberlin
...	Frederick, C. H....	North Amherst	254	Hollinger, T. H.....	Columbus
352	Frederick, J. M.....	Akron	390	Hoover, L.....	Gratis P. O.
204	Frew, Edward S.....	Coshocton	148	Huppy, Henry.....	Piqua
165	Fribley, Jacob T.....	Navaree	344	Horn, Wm.....	Zanesville
337	Friedland, Mrs. S. A. ...	Coalton	012	Hornung, Richard M....	Dresden
607	Frieseman, William H..	Cleveland	393	Hosler, J. N.....	Shaucks
463	Fulling, E. G.....	Cleveland	198	Hosler, L. Roy.....	Shaucks
140	Fulton, D. W.....	Sidney	331	Hosmer, Angus.....	Findlay
219	Fulton, Norberto D....	Ripley	322	Hoyt, H. W.....	Norwalk
128	Gackenheimer, M. U..	Van Wert	030	Hubbard, Lyle.....	Medina
398	Gager, D. A.....	Oberlin	096	Hull, L. M.....	Nelsonville
017	Galbrath, C. W.....	Manchester	471	Huls, J. W.....	Rockbridge
363	Garlington, W. D.....	Cumberland	238	Hunt, T. J.....	Wilmington
183	Garratt, Eva M.	Adamsville	286	Hutchings, J. Harvey...	Bellevue
444	Garver, Rudy.....	Strasburgh	374	Hutchins, John.....	Roscoe
052	Goddard, B. F.....	Findlay	317	Hutchman, W. M.....	Marietta
026	Goebel, Chas. W.....	Springfield	325	Ingalls, N. R.....	La Grange
339	Gonvy, C. Howard....	Cleveland	242	Jay, Myron.....	Ravenna
249	Gurman, Alice M.....	Cincinnati	127	Jenkins, Wm.....	Dayton
244	Graham, John A.....	Avondale	305	Jewett, George D.....	Cleveland
382	Grayum, Chas. W.....	Gallipolis	228	Johnson, Albert.....	Painesville
261	Green, J. B.....	Plymouth	070	Johnson, J. D.....	Canton

600	Johnson, W. H.....	Urbana	201	Meily, Geo. W.....	Mansfield
213	Johnson, Vara I.....	Grafton	338	Mengeler, George.....	Cincinnati
357	Justice, D. W.....	Poland	124	Mentel, E. H.....	Dayton
450	Karsch, Geo. V.....	Cincinnati	139	Metz, Chas. L.....	Youngstown
118	Katz, Otto W.....	Gallion	259	Miller, E. C.....	Canton
231	Kehres, Ed. J.....	Cleveland	275	Mitchell, Geo. F.....	Columbus
002	Keiser, N. H.....	Delta	610	Mitchell, Geo. J.....	Cleveland
439	Kellogg, Edwin E.....	Cincinnati	347	Monroe, C. A.....	Logan
274	Kells, Harry B.....	Steubenville	113	Mooney, H. S.....	Curdington
449	Kendall, A. L.....	Fayette	379	Moore, R. O.....	Leesville
049	Kern, J. E.....	Bucyrus	212	Morgan, Annette.....	Clarksburgh
413	Kerr, John.....	Shelby	181	Mariland, D. G.....	Edgerton
108	Kester, J. G.....	Wooster	215	Moser, E. A.....	Wapakoneta
421	Kilbourne, H. A.....	Canton	176	Moser, I. F.....	Lima
045	King, Kate R.....	Canfield	132	Moses, C. W.....	Georgetown
408	King, Mrs. M. L.....	Arlington	230	Munch, J. A.....	Toledo
197	Klussman, Maggie.....	Elliston	443	Murphy, Chas. W....	Wilmington
085	Knouff, W. L.....	Antrim	072	Murphy, M. J.....	Cincinnati
246	Knowles, Geo. S.....	Felicity	336	Murray, S. W.....	Washington C.H.
100	Koenig, F. H.....	Cincinnati	035	Murray, Thomas.....	Plain City
373	Kauss, Herman J.....	Tiffin	409	Myers, Chas. G.....	Lima
144	Krieger, Otto.....	Cincinnati	203	McClain, Lewis.....	Letart Falls
090	Krimmell, W. L.....	Circleville	366	McCanaughey, J. H.....	DeGraff
462	Krower, C. T.....	Wyoming	448	McCormick, J. K....	Youngstown
372	Kumler, S. D.....	London	324	McCoy, R. L.....	Piqua
351	Kusnick, L.....	Riverside	401	McCoy, W. J.....	Bloomingsburg
131	Lamb, L. N.....	Cincinnati	136	McCracken, J. M....	Bellefontaine
303	Lamparter, John.....	Akron	014	McCright, D. H.....	Ottawa
346	Leach, Sherman.....	Mt. Sterling	122	McDowell, C. O.....	Medina
426	Leas, R. W.....	West Sonora	402	McFadden, Chas. L....	Van Wert
442	Lefever, E. J.....	Eldorado	084	McKee, H. Wilson.....	Athens
192	Leist, Isaiah, Jr.....	Napoleon	348	McKinley, L. P.....	Uhrichsville
018	Leitzell, A. D.....	Seville	329	McLaughlin, J. D.....	Butler
288	Leonard, L. C.....	Dayton	156	McMillen, C. S.....	Mt. Sterling
162	Leonard, N. S.....	Kinsman	330	McMillen, Florence...	Greenwich
270	Lewis, Thos. C.....	Jackson	340	McNichols, W.....	Barnesville
170	Leggett, N. E.....	Marysville	327	Neal, J.....	Waynesville
389	Linser, Geo. J.....	Bucyrus	163	Neff, J. Grant.....	New Carlisle
003	Lindsey, W. B.....	Canton	...	Nelson, Geo. W.....	Springfield
010	Long, Lee.....	Richwood	316	Neuer, John Jacob.....	Marietta
075	Long, Uri.....	Bryan	451	Newberger, Myer.....	Cincinnati
427	Lautzenheiser, M.....	New Philadelphia	023	Nichols, Julia A....	Columbus
033	Lucas, Chas. C.....	Kipton	314	Nickerson, Alice J....	Greenwich
172	Luce, James D.....	Urbana	401	Noel, C. H.....	Van Wert
041	Lupton, W. O.....	Delaware	349	Norris, T. W.....	Mt. Gilead
083	Lush, M. Agnes.....	Loudonville	087	Norwood, J. N.....	Cincinnati
167	Luthringer, Jos. L.....	East Liverpool	061	Odaffer, David M.....	Bucyrus
296	Lutzenberger, Chas.....	Dayton	285	Odell, John L.....	Delta
243	Lyon, Walter P.....	Ravenna	323	Oestermeyer, John....	Zanesville
252	Maiberger, N.....	Elyria	318	Ohl, Sarah J.....	Mineral Ridge
435	Maitland, John K.....	Bedford	177	Packard, Hannah.....	Chatham Center
058	Mandabach, P. A....	Columbus	150	Park, C. W.....	Elyria
332	Martin, George W.....	Dayton	609	Parkin, R. J.....	Newburg Station
009	Martin, William.....	Cincinnati	355	Parish, Alice.....	Hamilton
214	Martin, Wm., Jr.....	Mansfield	217	Pettys, H. R.....	Republic

016	Peyton, F. R.....	Manchester	383	Schroder, John A.....	Dayton
223	Pfanner, John A.....	Dayton	387	Scott, Addie M....	Waynesburgh
025	Pflueger, C. F.....	Cary	321	Scott, Mary A....	Waynesburgh
367	Pheneger, H. A.....	Columbus	210	Scott, Winfield.....	Senecaville
038	Philips, Jemima S.....	North Jackson	403	Seebohn, Chas. C....	Pomeroy
182	Poole, Ira A.....	Fayette	...	Seward, J. E.....	Fremont
193	Potter, E. L.....	Sherwood	169	Sharpe, John A.....	Akron
399	Prass, John N.....	Dayton	021	Sharp, R. D.....	William-burg
001	Pratt, E. M.....	Delta	133	Shaw, Alma.....	Cardington
019	Pray, C. S.....	White House	319	Sheets, M. L.....	Dayton
425	Rabe, E. M.....	Clyde	105	Shephard, M. Q.....	Nolsonville
110	Ralston, G.....	Martin's Ferry	190	Shepherd, Chas. H....	Arcanum
419	Ralston, W. M.....	Fostoria	250	Shepherd, Enos H....	Hillsboro
380	Ray, Pliny.....	Perrysburg	362	Shoemaker, W.....	DeGraff
298	Raymer, C. S.....	Coshocton	341	Showalter, D. W....	Springfield
138	Rees, Mrs L. J.....	South Charleston	092	Shotwell, W. D.....	Cincinnati
369	Reid, J. C.....	Cuyahoga Falls	173	Shull, H. F.....	Lima
054	Remple, Rudolph.....	Logan	300	Schumway, C., Jr....	Columbus
297	Richards, E. H.....	Litchfield	392	Siddall, Eugene E....	Findlay
310	Richards, Ed. T.....	Marietta	265	Sight, Henry F.....	Columbus Grove
111	Richey, R. E.....	New Paris	097	Silberling, J. H....	Cleveland
418	Ritzenthaler, P....	Kipton	253	Sisson, Harvey.....	McArthur
027	Robb, Clara E.....	Cincinnati	277	Smart, C. H.....	Pioneer
095	Roberts, Chas. F....	Columbus	074	Smith, C. F.....	Swanton
229	Robinson, J. S.....	Washington C.H.	465	Smith, Louis.....	Cincinnati
415	Robinson, L. M.....	Sabina	196	Smith, Frank L.....	Defiance
384	Robinson, Wm. L....	Gallipolis	271	Smith, Wm. P.....	Crestline
406	Rockey, Adolph.....	Chatfield	158	Snell, Ira N.....	Toledo
405	Rockey, David.....	Chatfield	257	Snodgrass, Carrie M....	Kenton
381	Rogers, Geo.....	Bowling Green	371	Snyder, Mary J.....	LaGrange
064	Roll, R. G.....	New Holland	240	Southard, F. M....	Spencerville
353	Roth, Louis.....	Cleveland	088	Spamer, Geo. H.....	Cincinnati
258	Rotterman, Chas. E....	Dayton	135	Spidel, C. E.....	Wilmot
091	Rowe, C. P.....	Circleville	086	Stableton, W. W....	Manchester
186	Ruch, C. E.....	Salem	239	Stahl, Hugo.....	Sidney
447	Rucker, B. J.....	Richwood	378	Staker, G. A.....	Bremen
076	Russ, A. E.....	Shiloh	106	Stamat, W. M.....	Bellefontaine
470	Rusk, Wm. A.....	Malta	308	Stausburg, J. B.....	Urbana
202	Russell, Lance M....	McArthur	278	Steele, A. E.....	Chillicothe
368	Ryan, Thos. J.....	Columbus	342	Steidle, Chris. F....	Cincinnati
299	Rynard, Mary A.....	Kent	302	Steinbacher, E. E....	Akron
222	Sager, James.....	Marysville	006	Sieinman, Perry D....	Lancaster
424	Sanders, E. C.....	Metamora	397	Stem, John F.....	Savannah
467	Sanford, H. S.....	Lima	255	Stephan, Wm.....	Cincinnati
468	Sanford, S., Jr.....	Lima	245	Stewart, F. C.....	Auburn
440	Saunders, E. G.....	Cleveland	350	Stewart, W. N.....	Brookfield
073	Saviers, George.....	Plymouth	423	Stockhaus, Wm. F....	Cleveland
211	Sawyer, Chas. H....	Mineral Point	241	Stockmon, Chas. B....	Loudonville
608	Saxby, E. A.....	Weston	089	Stover, W. L.....	Hayesville
469	Seals, C. B.....	Cleveland	062	Streich, Philip M....	Portsmouth
187	Schantz, Jas. J.....	Cleveland	407	Stringham, A. W....	Steuben
248	Schilling, Mary C....	Louisville	104	Strobel, John B....	Ironton
236	Schmetzler, Emil U....	Archbold	218	Strutton, L. D., Jr..	Norwalk
069	Schoerger, Geo.....	Port Clinton	103	Sullivan, E. N.....	Urbana
145	Schuette, J. R.....	Columbus	441	Sutterfield, D. R....	West Union

301	Swan, John.....	South Toledo	365	Weller, J. P.....	West Liberty
251	Sweeney, Geo. W.....	Marion	152	Weimer, J. E.....	Hoytsville
256	Swift, Edgar J.....	Ashtabula	179	Wenger, F. D.....	Galion
024	Taylor, L. Bennett....	Zanesville	206	Werner, Chas. J.....	Hazleton
335	Taylor, J. H....	Washington C. H.	043	Westfall, A. L.....	Troy
433	Thieman, Albert F.....	Dayton	604	Wheeler, F. K.....	Lima
199	Thomas, Jas. N.....	Lucasville	269	Wetterstroem, Theo...	Cincinnati
311	Thrall, H. H.....	Xenia	263	Whinery, W. F.....	Sabina
414	Timmerman, J., Jr.....	Leipsic	601	Whitsit, P. B.....	Columbus
047	Tobler, C. B.....	Thornville	293	Whitcomb, E.....	Cleveland
294	Treon, Isaac.....	Lima	370	Whiteis, V. R.....	Kalida
168	Triem, Daniel.....	Portage	315	Wickham, Agnes B....	Norwalk
040	Trimble, B. E.....	Salem	...	Williams, E.....	Newark
008	Upton, Harley Scott...	Hamilton	099	Williams, O. G.....	Ravenna
137	Uthe, Chas. A.	Cleveland	326	Wisterman, G. J..	Shane's Crossing
411	Vance, Elizath I..	Shane's Crossing	077	Witherstine, Elizabeth.....	Nova
396	Van Dyke, C. M.....	Lebanon	205	Witschner, Martin.....	Tiffin
436	Van Dyke, J. M.....	Mason	260	Woesten, J. F.....	Cincinnati
613	Van Ewegen, Wm. J....	Toledo	051	Wolfe, J. Chas.....	Springfield
417	Vigus, C. S.....	Xenia	456	Wooster, Alma F.....	Norwalk
273	Vogt, J. J.....	Cleveland	264	Wray, R. G.....	London
130	Vortkamp, B. H.....	Cincinnati	226	Wright, E. S.....	New London
284	Vassler, J. C.....	Greenville	280	Yaeger, L.....	Eaton
050	Wagerly, Geo.....	Bucyrus	194	Yerian, W. D.	Sharon
453	Wagner, Wm. S.....	Cincinnati	386	Zecher, Louis.....	Hamilton
174	Walker, J. F.....	Steubenville	195	Zellers, Joseph A....	Steubenville
029	Wallace, J. L..	New Philadelphia	375	Ziliox, David.....	Piqua
005	Ward, H. M.....	Lancaster	080	Zimmerman, Chas.....	Wooster
429	Warner, W. W.....	Monroe	034	Zimmerman, L. P.....	Fremont
053	Weil, John.....	Findlay	142	Zubor, Peter.....	Findlay
364	Weller, Chas. G.....	DeGraff	345	Zurborn, Ernest.....	Hamilton
020	Weller, G. M.....	Zanesville			

